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ERRATA IN VOL. XVII.

- p. 3, Table II., opposite Chitrâ, in the last column,
for 183 28 10. *read* 184 28 10.
- p. 120, Text line 1, for Hiranya *read* Hiranya-
.. .. line 16, for bhuvanânta , *read*
bhuvanânta-.
- p. 146 a. last line: for preceding. *read* following.
- p. 157 b. lines 24, 25. *read* $10000 - (1890 + 200$
 $+ 9939) = 10000 - 1939 = 8061$.
- p. 160 a. line 29, for 66277 5956, *read* 66277 5992
And, as the result of this, in lines 31
to 41 *read*, Hence the increase in 1000
years is 13255 5900; in 100 years,
1325 5500; and in 59 75 days, 2 1684.
And b for 5000 years is 499 8; for 1000
years, 500 0; and for 100 years, 450 0.
Therefore, as above —

| | |
|-----------------|-------|
| | b |
| A. D. 1899..... | 581 8 |
| 5000 years..... | 499 8 |
| 59 79 days..... | 168 4 |

Kaliyuga 0 ... 2500

Accordingly b. for A. D. 1899 is
581 8; or, the fraction being larger
than $\frac{1}{2}$, in round numbers 582

„ b, line 11, for 1204. *read* 1204.

„ b, note 17; *cancel this note.*

- p. 163, Table 5, and p. 161, Table 6 As we have
seen under the correction notified
above for p. 160 a, line 29 b. for
A. D. 1899 is in round numbers 582;
whereas in Table 5 it is given as 587.
Following the same process, all the
figures in Table 5, col. b. should,
strictly speaking, be decreased by
5; when they would be in accordance
with the revolutions of the moon's
apsis as given in the text of the
Sûrya-Siddhânta. Three or four
hundred years ago, however, the Hindu
astronomers applied to the elements of
the *Sûrya-Siddhânta* a correction,
technically called *bîja*, which from
that time has been generally adopted
in calculations. In Table 5, col. b,
the figures, all through, as they stand,
are correct for the elements of the
Sûrya-Siddhânta as modified by this
bîja. And, as the Table is for the
nineteenth century A. D., when the
bîja has to be applied, the inclusion of
the *bîja* in it is proper and correct

The *bîja*, however, has to be rejected
for the centuries anterior to the time
of its introduction; and this is to be
effected by a modification of Table 6.
Here again (Table 6), in col. b. the
figures, all through, as they stand,
include the *bîja*. In the case of the
centuries marked 15 to J. 3, in which
the *bîja* is not to be applied, in col. b.
correct the numbers from 185 to 785,
inclusive, by substituting 0 for the last
figure, thus, for 185, *read* 180; for
484, *read* 480; and for 785, *read* 780.
Then, with Table 5 as it stands, and
with Table 6 thus corrected, the final
results will be in accordance with the
text of the *Sûrya-Siddhânta* with
the *bîja*. For the centuries marked
G. 1 and G. 2, the application of the
bîja is proper and necessary; and the
figures 972 and 486 are correct, as they
stand.

- p. 167, Table 7, opposite 2nd August (common
year), for b 720, *read* 730. Opposite
13th August *read* b 129 for 126, and
opposite 14th August *read* b 166 for
164.
- p. 168, Table 7, opposite 12th October (common
year for d 630, *read* 639.
- p. 172, Table 10, opposite the argument 950, for
equation 76, *read* 80.
- „ Table 11, opposite the argument 200, for
equation 4 10, *read* 14 10
- p. 219, note 16, line 5, for *Ârdrâ*, *read* *Ârdrâ*,
and line 11, *omit the word* March
- p. 239 b, line 46, for trayô, *read* trayô.
- p. 240 b, last line, *omit the comma at the end of*
the line.
- p. 248 b, line 7, for Which, *read* which
- p. 250 a, line 20, for ithau, *read* tithau.
- „ b, line 11, for punarvasu, *read* punarvasu.
- p. 251 b, last line, *read* (No. 17 instead of No. 9).
- p. 252 a, line 6, *omit the comma after tithi*
- p. 270, in the column for the Tithi-Suddhi,
opposite 729, for 1 9, *read* 1 90; and
opposite 749, for 1 6, *read* 1 60.
- p. 271, in the column for the Tithi-Kendra,
opposite 1040, for 1 45, *read* 1 48.
- p. 315 b, last line, for Varâhi, *read* Varâha.
- p. 336 b, line 7 from the bottom, for mâna -
vijaya-râjyê, *read* mâna-vijaya-râjyê

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THE TWELVE-YEAR CYCLE OF JUPITER.

BY SHANKAR BALKRISHNA DIKSHIT; BOMBAY EDUCATIONAL DEPARTMENT.

THE names of the *saṃvatsaras*, or years, of the **Twelve-Year Cycle of Jupiter**, are determined in accordance with the following rule in the *Bṛihat-Saṃhitā* of Varāhamihira, *adhyāya* viii. verse 1;—

Nakshatrēṇa sah=odayam
upagachchhati yēna dēvapati-mantrī¹ |
tat-saṃjñam vaktavyam
varsham māsa-kramēṇ=aiva ||

“With whatever *nakshatra* (Jupiter) the counsellor of (Indra) the lord of the gods attains (*his*) rising, the year is to be spoken of (*as*) having the appellation of that (*nakshatra*), in accordance with the order of the months.”

Here, by the word *udaya*, ‘rising,’ we have

to understand, not the daily rising of Jupiter, but his **heliacal rising**. Jupiter becomes invisible for some days before and after his conjunction with the sun. The sun’s daily motion is faster than that of Jupiter. So, when the sun in his course comes near Jupiter, the latter becomes invisible, on the west side of the horizon; and he is then said to set. He remains from twenty-five to thirty-one days in this state of invisibility. And, when he is left behind by the sun, he again becomes visible, in the east; and then he is said to rise. Generally, in India, when the interval between the daily settings or risings of the sun and Jupiter amounts to forty-four minutes (of time), then the so-called setting or rising of

¹ The reading that I give is from an old manuscript in my possession. But the commentator, Utpala, explains the verse with the reading—*nakshatrēṇa sah=odayam astam vā yēna gāti sara-mantri*,—“with whatever *nakshatra* (Jupiter) the counsellor of the gods attains (*his*) rising or setting.” It is curious that the text, in my manuscript copy, stands as given above. The copyists, however far they might go wrong in ordinary transcribing, could not, unless intentionally, turn the letters मस्तं वा येन याति सुर, if they were original at all, into मुपगच्छति येन देवपति. And Utpala himself gives the note—*Rishiputr-ādibhiḥ udaya-nakshatra-māsa-saṃjñā-kramēṇa varsham jñātavyam ity=uktam*,—“it is said by Rishiputra and others, that the year is to be known according to the order of the name of the month of the *nakshatra* of the rising (of Jupiter).” Also, of the other authorities to be mentioned and treated fully in a continuation of this article, amounting to not less than ten, which I find giving the rule of naming the years of the cycle according to the risings of Jupiter, all, except the *Sūrya-Siddhānta*, make each year take its name from only the rising of the planet; not from

its setting. In the *Sūrya-Siddhānta*, xiv. 17, the text is—*Kārttik-ādini varshāni Gurōr ast-odayāt tathā*,—“so the years Kārttika and the others (*that follow*), (*are to be named*) from the setting or rising of Jupiter.” But there also, the commentator, Ranganātha, remarks—*idānim udaya-varsha-eyavahir-ganakair ganyatē*,—“at the present time, the practice of (*naming*) the year by the rising, is taken into account by astronomers.”—[The reading in the text above, is the one adopted by Kern, in his edition of the *Bṛihat-Saṃhitā*, p. 47. His translation (*Jour. R. As Soc. N. S. Vol. V. p. 45*) is—“each year (*during which Jupiter completes a twelfth part of his revolution*) has to bear the name of the lunar mansion in which he rises; the years follow each other in the same order as the lunar months.” Both in his “Various Readings,” p. 6, and in the note to his translation, he notices the reading *sah=odayam astam vā yēna gāti sara-mantri*. But he points out that “the comparison of the MSS leaves little doubt that this reading is a correction, suggested by the remark of Utpala, that, in case the planet should set in one and rise in another *nakshatra*, only that name must be taken which agrees with the order of the month.”—J. F. F.]

Jupiter, i.e. his heliacal setting or rising, takes place.

To such a system, as is taught in this verse of Varahamihara, and by several other authorities, of determining the commencement of a *saṁvatsara* of the Twelve-Year cycle and of naming it, from Jupiter's heliacal rising, I would give the name of the **heliacal rising-system**, in order to distinguish it from the other system in which the duration and name of a *saṁvatsara* of the twelve year cycle are determined from the particular sign of the zodiac in which Jupiter stands with reference to his mean longitude, and which latter system, to be treated more fully in a continuation of this article, I would name the **mean-sign-system**.²

Now, the years of the Sixty-Year Cycle of Jupiter, and of the Twelve-Year Cycle according to the mean-sign system are determined by his mean longitude,³ which sometimes differs from his apparent longitude by as much as fifteen degrees. But, as the disappearance or reappearance of Jupiter is no imaginary thing, it is evident that it can be calculated, and is to be calculated, only according to Jupiter's actual place, that is his apparent longitude (or right ascension), and not from his mean longitude. And, consequently, the beginning of each *saṁvatsara* of the Twelve-Year Cycle depends on **Jupiter's apparent longitude** at the time of his heliacal rising.

Three systems of determining the *nakshatra* with which the heliacal rising of Jupiter takes place, will be explained below. And, in connection with all three systems, an important point may be noticed here. One revolution of Jupiter, in the zodiac, is completed in

about twelve years; and, in twelve years, there are twelve revolutions of the sun (that is of the earth). So that, in this period of about twelve years, there are only eleven conjunctions of the sun and Jupiter. Therefore, in twelve years there are only eleven heliacal risings of Jupiter. The interval between two risings is generally 399 days. And thus, as the *saṁvatsaras* of the Twelve-Year Cycle begin with the heliacal risings of Jupiter, **there are only eleven saṁvatsaras in twelve years**; the duration of each being about 400 days, and one *saṁvatsara* being altogether omitted.

The names of the lunar months are used as the names of the *saṁvatsaras* of the Twelve-Year Cycle of Jupiter. And the names of these months are given to the *saṁvatsaras*, in accordance with the particular *nakshatra* in which Jupiter's heliacal rising takes place. Of the twenty-seven *nakshatras*, two are assigned to each of nine of the twelve months; and three to each of the remaining three months. The rule for this is given in the *Bṛihat-Saṁhitā*, viii. 2:—

Varshāṇi Kārttik-ādīny=

āgnēyād bha-dvay-ānuyōgīni |

kramaśas tri-bhaṁ tu pañchamam

upāntyam antyaṁ cha yad varsham ||

"The years Kārttika, and others (*that follow*), combine two *nakshatras*, from (*the nakshatra*) belonging to Agni (*as the starting-point*),⁴ in regular succession; but that year which is the fifth, (*or*) the last but one, or the last, has three *nakshatras*."⁵ And, from this and similar authorities, we obtain the results exhibited in Table I., on the upper part of page 3 below, for the naming of the *saṁvatsaras* from the *nakshatras*.⁶

² I shall discuss it in full on another occasion. It does not apply to the Gupta inscriptions, with special reference to which this paper has been written. The *saṁvatsaras* in those inscriptions are proved only by the heliacal-rising system now given by me; and there is not the least doubt of its being in use, and of its having been applied in those records.

³ The mean longitude of a heavenly body is the longitude of an imaginary body, of the same name, conceived to move uniformly with the mean motion of the real body.

⁴ i.e. from Kṛittikā. Azni is the regent of the *nakshatra* Kṛittikā, which was, at one time, the first in order of the lunar mansions.

⁵ Kerna-text is the same. His translation is—"the year Kārttika and following comprehend two lunar mansions beginning with Kṛittikā, and so on in regular succession, except the fifth, eleventh, and twelfth years,

to each of which appertain three asterisms."—J. F. F.]

⁶ I should state, however, that there is a little difference of opinion on this point. Utpala, the commentator on the *Bṛihat-Saṁhitā*, has discussed it at length; and arrived at the conclusion which is exhibited in Table I. In the ancient and modern works that I have referred to, I find ten authorities,—and such ancient names as those of Vṛiddha-Garga and Kaśyapa among them,—giving the rule regulating the names of the *saṁvatsaras* of the Twelve-Year Cycle by the *nakshatras*. Out of these ten, Garga (not Vṛiddha-Garga), and Parāśara, as quoted by Utpala,—but these two only,—hold that the tenth and eleventh months, Śrāvaṇa and Bhādrapada, have three *nakshatras* each; viz. Śrāvaṇa, Dhaniśbhā and Śatātārakā, are assigned to Śrāvaṇa; and Purva-Bhādrapadā, Uttarā-Bhādrapadā, and Kṛvati, to Bhādrapada. and, consequently, Āśvina has only Aṣvini and Bharāṇi.

TABLE I.
Regulation of the Names of the Samvatsaras from the Nakshatras.

| Names and Grouping of the Nakshatras. | Names of the Months to be allotted to the Samvatsaras. |
|--|--|
| Kṛittikā; Rōhiṇī | Kārttika. |
| Mṛiga; Ārdrā | Mārgaśīrsha. |
| Punarvasu; Pushya | Pauṣa. |
| Āślēshā; Maghā | Māgha. |
| Pūrvā-Phalgunī; Uttarā-Phalgunī; Hasta | Phālguna. |
| Chitrā; Svāti | Chaitra. |
| Viśākhā; Anurādhā | Vaiśākha. |
| Jyēsthā; Mūla | Jyēsthā. |
| Pūrvā-Ashādhā; Uttarā-Ashādhā; (Abhijit) | Āshāḍha. |
| (Abhijit); Śravaṇa; Dhanishthā | Śrāvana. |
| Śatatārakā; Pūrvā-Bhādrapadā; Uttarā-Bhādrapadā | Bhādrapada. |
| Révatī; Āśvinī; Bharanī | Āśvina. |

TABLE II.
Longitudes of the Ending-points of the Nakshatras.

| Order of the Nakshatras. | System of Equal Spaces. | | | Sy-stems of Unequal Spaces. | | | | | | | | |
|--------------------------|-------------------------|------|------|-----------------------------|-------|------|------|------|--------------------------|------|--|--|
| | | | | Garga System. | | | | | Brahma-Siddhānta System. | | | |
| | Deg. | Min. | Sec. | | Deg. | Min. | Sec. | Deg. | Min. | Sec. | | |
| Āśvinī | 13° | 20' | 0'' | ..... | 13° | 20' | 0'' | 13° | 10' | 35'' | | |
| Bharanī | 26 | 40 | 0 | $\frac{1}{2}$ | 20 | 0 | 0 | 19 | 45 | 52½ | | |
| Kṛittikā | 40 | 0 | 0 | ..... | 33 | 20 | 0 | 32 | 53 | 27½ | | |
| Rōhiṇī | 53 | 20 | 0 | 1½ | 53 | 20 | 0 | 52 | 42 | 20 | | |
| Mṛiga | 66 | 40 | 0 | ..... | 66 | 40 | 0 | 65 | 52 | 55 | | |
| Ārdrā | 80 | 0 | 0 | $\frac{1}{2}$ | 73 | 20 | 0 | 72 | 28 | 12½ | | |
| Punarvasu | 93 | 20 | 0 | 1½ | 93 | 20 | 0 | 92 | 14 | 5 | | |
| Pushya | 106 | 40 | 0 | ..... | 106 | 40 | 0 | 105 | 24 | 40 | | |
| Āślēshā | 120 | 0 | 0 | $\frac{1}{2}$ | 113 | 20 | 0 | 111 | 59 | 57½ | | |
| Maghā | 133 | 20 | 0 | ..... | 126 | 40 | 0 | 125 | 10 | 32½ | | |
| Pūrvā-Phalgunī | 146 | 40 | 0 | ..... | 140 | 0 | 0 | 138 | 21 | 7½ | | |
| Uttarā-Phalgunī | 160 | 0 | 0 | 1½ | 160 | 0 | 0 | 158 | 7 | 0 | | |
| Hasta | 173 | 20 | 0 | ..... | 173 | 20 | 0 | 171 | 17 | 35 | | |
| Chitrā | 186 | 40 | 0 | ..... | 186 | 40 | 0 | 183 | 28 | 10 | | |
| Svāti | 200 | 0 | 0 | $\frac{1}{2}$ | 193 | 20 | 0 | 191 | 3 | 27½ | | |
| Viśākhā | 213 | 20 | 0 | 1½ | 213 | 20 | 0 | 210 | 49 | 20 | | |
| Anurādhā | 226 | 40 | 0 | ..... | 226 | 40 | 0 | 223 | 59 | 55 | | |
| Jyēsthā | 240 | 0 | 0 | $\frac{1}{2}$ | 233 | 20 | 0 | 230 | 35 | 12½ | | |
| Mūla | 253 | 20 | 0 | ..... | 246 | 40 | 0 | 243 | 45 | 47½ | | |
| Pūrvā-Ashādhā | 266 | 40 | 0 | ..... | 260 | 0 | 0 | 256 | 56 | 22½ | | |
| Uttarā-Ashādhā | 280 | 0 | 0 | 1½ | 280 | 0 | 0 | 276 | 42 | 15 | | |
| (Abhijit) ... .. | ..... |  |  | (Balance) | ..... |  |  | 280 | 53 | 30 | | |
| Śravaṇa | 293 | 20 | 0 | ..... | 293 | 20 | 0 | 294 | 7 | 5 | | |
| Dhanishthā | 306 | 40 | 0 | ..... | 306 | 40 | 0 | 307 | 17 | 40 | | |
| Śatatārakā | 320 | 0 | 0 | $\frac{1}{2}$ | 313 | 20 | 0 | 313 | 52 | 57½ | | |
| Pūrvā-Bhādrapadā | 333 | 20 | 0 | ..... | 326 | 40 | 0 | 327 | 3 | 32½ | | |
| Uttarā-Bhādrapadā | 346 | 40 | 0 | 1½ | 346 | 40 | 0 | 346 | 49 | 25 | | |
| Révatī | 360 | 0 | 0 | ..... | 360 | 0 | 0 | 360 | 0 | 0 | | |

Now the 27th part of the ecliptic circle is called a **nakshatra**. And 360 degrees, divided by 27, gives 13 degrees, 20 minutes (of arc). Therefore, there is this much distance from the beginning of one *nakshatra* to the beginning of the next following. And, when the longitude of a heavenly body exceeds nil, but does not exceed 13 degrees 20 minutes, it is said to be in *Āśvinī*;⁷ and so on. The longitudes of the ending points of all the *nakshatras*, on this **system of equal spaces**, are given in the last column but two in Table II., on the lower part of page 3 above. And generally, whenever we meet with a *nakshatra* with reference to the place of a heavenly body, that *nakshatra* is to be taken in the above sense.

There is, however, a **second method of naming the nakshatras** with reference to the places of heavenly bodies. And, though it has now gone almost out of use, yet it was undoubtedly prevalent to a great extent in early times, and was much made use of, on important religious occasions at least. The chief feature of it is, that the space on the ecliptic allotted to each *nakshatra* is not equal. Fifteen *nakshatras* are held to be of an equal average space; but six, of one and a half times the average; and six others, of only half the average.

A **system of unequal spaces**, according to this method, is referred to in some of the verses from the *Garga-Saṁhitā*, which are quoted by Utpala in his commentary on the *Bṛhat-Saṁhitā*. The commentary, with the passages quoted in it, runs—

Tathā cha Gargaḥ |
 Uttarās cha tath=Ādityaṁ Viśākhā ch=aiva
 Rôhiṇī |
 êtāni śaḍ adhyardha-bhōgāni ||
 Pausha-Āśvi-Krittikā - Sōma - Tishya - Pitrya-
 Bhag-āhvayāḥ
 Sāvitra-Chitra-Ānūrâdhâ Mûlâ Tōyâṁ cha
 Vaishnavam
 Dhanishth=Ājaikapâch=ch=aiva sama-vargah
 prakîrtitah |
 êtāni pañchadaśa sama-bhōgāni ||
 Yāmy-Aindra-Raudra-Vāyavya-Sârpa- Vâruṇa-
 samjñitāḥ |
 êtāni śaḍ ardha-bhōgāni ||
 "And so Garga (*says*), 'the Uttarās (*i.e.*

Uttarâ-Phalgunî, Uttarâ-Ashâdhâ, and Uttarâ-Bhâdrapadâ), and Āditya (Punarvasu), Viśākhâ, and also Rôhiṇî; these six (*are*) of one-and-a-half times (*the average*) longitude. ' (*The nakshatras*) of which the names are Paushya (Rêvati), Āśva (Āśvinî), Krittikâ, Sōma (Mṛiga), Tishya (Pushya), Pitrya (Maghâ), and Bhaga (Pûrvâ-Phalgunî), (*and also*) Sāvitra (Hasta), Chitrâ, Anûrâdhâ, Mûla, Tōya (Pûrvâ-Ashâdhâ), and Vaishnavâ (Śravaṇa), (*and*) Dhanishthâ, and also Ājaikapâd (Pûrvâ-Bhâdrapadâ); (*this class of nakshatras*) is called the equal class; these fifteen (*are*) of equal (*average*) longitude. ' (*The nakshatras*) which have the appellations of Yāmya (Bharanî), Aindra (Jyêshthâ), Raudra (Ādrâ), Vāyavya (Svâti), Sârpa (Ālêshâ), and Vâruṇa (Śatâtârakâ); these six (*are*) of half (*the average*) longitude."

In this system, which I would name the **Garga system of unequal spaces**, the number of the *nakshatras* is twenty-seven, as usual. The average space of a *nakshatra*, therefore, is 13 degrees, 20 minutes; a one-and-a-half space is 20 degrees; and a half space is 6 degrees, 40 minutes. The longitudes of the ending-points of all the *nakshatras*, according to this system, are given in the last column but one in Table II., on the lower part of page 3 above; and the entries of $\frac{1}{2}$ and $1\frac{1}{2}$ in the sub-column, mark the spaces which differ from the average space. Nârada and Vasishṭha give this system in the same way as Garga. It seems to have originated in the fact that the distances between the chief stars, called *yōga-târa*, of the different *nakshatras*, are not equal. The distance is naturally expected to be 13 degrees, 20 minutes. But, in some cases it is less than 7 degrees; while in others it is more than 20 degrees. However, be the reason of the system what it may, there is no doubt that it was extensively in use in ancient times. And, that either it, or the very similar system of the *Brahma-Siddhânta*, explained below, was still in use, at least on important occasions, up to A.D. 862, is proved by the Dêogaḍh inscription of Bhôjadêva of Kanauj; the results for which, calculated by me, have been exhibited by Mr. Fleet at page 23 below.

Another system of unequal spaces is given in the *Brahma-Siddhânta*,⁸ chapter xiv. verses

⁷ Krittikâ, which is now the fifth, was, in the sixth century A.D., the third in the order of the *nakshatras* if reckoned from the vernal equinox.

⁸ By this name, is to be understood, throughout this paper, the *Siddhânta* by Brahmagupta.

45 to 53. In its leading feature, it is the same with Garga's system; but it differs a little from Garga's, in introducing Abhijit, in addition to the twenty-seven *nakshatras*. The moon's daily mean motion,—13 degrees, 10 minutes, 35 seconds,—is taken as the average space of a *nakshatra*. And, as the total of the spaces thus allotted to the usual twenty-seven *nakshatras*, on a similar arrangement of unequal spaces, amounts to only 355 degrees, 45 minutes, 45 seconds, the remainder,—4 degrees, 14 minutes, 15 seconds,—is allotted to Abhijit, as an additional *nakshatra*, placed between Uttarâ-Ashâdhi and Śravaṇa. This system, which I would name the **Brahma-Siddhanta system of unequal spaces**, is best explained by Bhāskarāchārya,⁹ in his *Siddhanta-Sirōmaṇi*, Part iii. chapter 2 (Grahagaṇitaspaṣṭādhikāra), verses 71 to 74. His text, and his own commentary on it, are as follows:—

Sthūlaṁ kṛitaṁ bhānayanam yad ētaj
jyōtirvidam saṁvyavahāra-hētōh || 71
Sūkshmaṁ pravakshyē=tha muni-praṇitaṁ
vivāha-yātr-ādi-phala-prasiddhyai |
adhyardha-bhōgāni śhaḍ atra taj-jūh
prōchur Viśakh-Āditibha-dhruvāni || 72
Shaḍ ardha-bhōgāni cha Bhōgi-Rudra-
Vāt-Āntak-Ēndr-ādhipa-Vāruṇāni |
śēshāny=ataḥ pañchadaś=aika-bhōgāny=
uktō bha-bhōgaḥ śaśi-madhya-bhuktiḥ || 73
Sarv-arksha-bhōg-ūnita-chakra-liptā

Vaiśv-āgrataḥ syād Abhijid-bha-bhōgaḥ | 74
Commentary.—Iha yan nakshatr-ānayanam
kṛitaṁ tat sthūlaṁ lōka-vyavahār-ārtha-mā-
traṁ kṛitaṁ || Atha Pulisa-Vasisht-Garg-
ādibhir yad vivāha-yātr-ādau saṁyak-phala-
siddhy-artham kathitaṁ tat sūkshmaṁ idānīm
pravakshyē || Tatra shaḍ adhyardha-bhōgāni |
Viśakhā Punarvasu Rōhiṇy=Uttarā-trayaṁ |
atha shaḍ ardha-bhōgāni | Āślēsh=Ārdra Svātī
Bharāṇi Jyēsthā Śatabhishak | ēbhyaḥ
śēshāni pañchadaś=aika-bhōgāni || Bhōga-
pramāṇam tu śaśi-madhya-bhuktiḥ 790 35 |
adhyardha-bhōgaḥ 1185 52½ | ardha-bhōgaḥ
395 17½ || Sarv-arksha-bhōgair ūnitānām
chakra-kalānām yach chhēshaṁ sō=Bhijid-
bhōgaḥ 254 15 ||

Translation.—"This bringing out of *nakshatras* (i.e. the method of finding *nakshatras*,

with their *ghaṭis* and *palas*) which has been made (in the preceding verses), (is) clumsy, (and is only) for the practical purposes of astrologers. Now I will explain the accurate (method) taught by [Pulisa, Vasisht, Garga, and other] sages, for the purpose of securing [good] results in the case of a marriage, a journey, &c. On this point, those who are versed in that (branch of the science) say, that six (*nakshatras*) have (each) a space which is one-and-a-half (times of the average space); (viz.) Viśakhā, Āditibha (Punarvasu), and the *dhruvas* (Rōhiṇi, Uttarā-Phalguni, Uttarā-Ashādhā, and Uttarā-Bhādrapadā). And six have a half space (each); (viz.) those the lords of which are Bhōgin, Rudra, Vāta, Antaka, and Indra, and Vāruṇa [Āślēshā, Ārdra, Svātī, Bharāṇi, Jyēsthā, and Śatabhishaj (Śatātārakā)]. The remaining fifteen (*nakshatras*) have one space (each). The (average) space of a *nakshatra* is declared to be the (daily) mean motion of the moon [790' 35" (=13° 10' 35")]. [A one-and-a-half space (is) 1185' 52½" (=19° 45' 52½") A half space (is) 395' 17½" (=6° 35' 17½")]. The space of the *nakshatra* Abhijit (which comes) next after Vaiśva (Uttarā-Ashādhā) is [the remainder, 254' 15" (=4° 14' 15"), of] the minutes of the whole circle, diminished by the spaces of all the (other) *nakshatras*."

The longitudes of the ending points of all the *nakshatras* according to this system, are given in the last column of Table II. on the lower part of page 3 above. And, as before, the entries of ½ and 1½ in the previous sub-column, mark the spaces which differ from the average space.

Now, the **additional nakshatra Abhijit**, introduced in this system, is not taken into account among the *nakshatras* from which the names of the months are derived.¹⁰ The question, therefore, arises,—what name is to be given to the *saṁvatsara*, when Jupiter rises in Abhijit? It can be solved thus. Abhijit is considered to be composed of the last quarter of Uttarā-Ashādhā and the first fifteenth part of Śravaṇa. This is stated in the following verse of Vasisht, as quoted in the commentary, called *Pigāshadhārd*, on the *Muhūrta-Chintāmaṇi*;—Abhijid-bha-bhōgam ētad Viśvêdē-

Brahma-Siddhanta it-self.

¹⁰ See the verse *varshāni Kṛttik-ādina*, &c., at page 2 above.

⁹ The system explained by Bhāskarāchārya, now given, is just the same as that in the *Brahma-Siddhanta*. It seems unnecessary, therefore, to give the verses from the

āntya-pādam akhilaṁ tat || ādya-chaturāśrī nādyō Haribhāṣya,—“this (*is*) the longitude of Abhijit; the whole last quarter of Viśvêdêva (Uttarā-Ashādhā), (*and*) the first four *ghaṭīs* (*i.e.* the fifteenth part) of Haribha (Śravaṇa).” And other later authorities give the same rule. A quarter of a *nakshatra* is 3 degrees, 20 minutes; and a fifteenth part is 53 minutes, 20 seconds; and the sum of the two amounts to 4 degrees, 13 minutes, 20 seconds. In other words, Abhijit consists of nineteen parts; of which the first fifteen come from, and properly belong to, Uttarā-Ashādhā; and the last four come from, and properly belong to, Śravaṇa. And the name of the *saṁvatsara* is to be determined as Āshādhā or Śravaṇa, according to the particular part of Abhijit in which Jupiter rises.

As a practical illustration of the working of the rules, I give, in Table III., immediately below, a list, in which the dates of the heliacal risings of Jupiter are shewn for twenty-four years, from Śaka-Saṁvat 1789 to 1803 in-

clusive; with Jupiter's apparent longitudes at the time, and his *nakshatras* determined from those longitudes. The dates of the risings of Jupiter are taken from ordinary *Pañchāṅgs* in my possession, printed in different Presses at various places. The lunar months in which the risings took place, are all given by the *Amānta* southern reckoning. The longitude of Jupiter at each rising, is calculated from his longitude, given in the *Pañchāṅgs*, at some stated interval; for instance, of seven or fifteen days. In naming the *nakshatras*, the Brahma-Siddhānta system of unequal spaces, in the last column of Table II. on the lower part of page 3 above, is the one that has been resorted to. In the last column, the months, that is the names of the *saṁvatsaras* which then began, are given. It will be seen, that Mārgaśīrsha is omitted in each of these two cycles. Other *saṁvatsaras* also may be omitted, in the same way, according to the circumstances of the particular cycle.

TABLE III.
Details of two Twelve-year Cycles of Jupiter.

| Śaka-Saṁvat. expired. | English Date. | Longitude of Jupiter | Nakshatra. | Month and Name of the Saṁvat-ara |
|-----------------------------------|----------------------|----------------------|----------------------|----------------------------------|
| | | Deg. Min. | | |
| 1789 Adhika-Jyêṣṭha śukla 10... | 7th June, 1858 | 41° 47' | Rôhini | Kārttika |
| 1781 Āshādhā śukla 14... .. | 13th July, 1859 | 77 2 | Punarvasu | Pauṣa. |
| 1782 Śrāvaṇa kṛishṇa 13 | 15th August, 1860 | 110 20 | Āśleshā | Māgha. |
| 1783 Bhādrapada śukla 13 | 16th September, 1861 | 141 38 | Uttarā-Phalgunī ... | Phālguna |
| 1784 Āśvina kṛishṇa 9 | 17th October, 1862 | 171 55 | Chitrā | Chaitra |
| 1785 Kārttika śukla 6 | 16th November, 1863 | 201 32 | Viśākhā | Vaiśākha. |
| 1786 Mārgaśīrsha kṛishṇa 3 | 16th December, 1864 | 232 3 | Mūla | Jyêṣṭha |
| 1787 Māgha śukla 2 | 18th January, 1866 | 263 48 | Uttarā-Ashādhā ... | Āshādhā |
| 1788 Māgha kṛishṇa 4 | 22nd February, 1867 | 298 0 | Dhanishthā | Śrāvaṇa |
| 1790 Chaitra śukla 5 | 29th March, 1868 | 334 3 | Uttarā-Bhādrapadā.. | Bhādrapada |
| 1791 Adhika-Vaiśākha kṛishṇa 10 | 6th May, 1869 | 10 27 | Āśvinī | Āśvina |
| 1792 Jyêṣṭha śukla 14... .. | 12th June, 1870 | 46 39 | Rôhini | Kārttika. |
| 1793 Śrāvaṇa śukla 1 | 18th July, 1871 | 81 47 | Punarvasu | Pauṣa. |
| 1794 Śrāvaṇa kṛishṇa 1 | 19th August, 1872 | 114 45 | Maghā | Māgha. |
| 1795 Bhādrapada kṛishṇa 14 | 20th September, 1873 | 145 53 | Uttarā-Phalgunī ... | Phālguna. |
| 1796 Āśvina śukla 11 | 21st October, 1874 | 175 52 | Chitrā | Chaitra. |
| 1797 Kārttika kṛishṇa 8 | 20th November, 1875 | 205 36 | Viśākhā | Vaiśākha |
| 1798 Pauṣa śukla 1 | 16th December, 1876 | 235 21 | Mūla | Jyêṣṭha |
| 1799 Pauṣa śukla 15 | 18th January, 1878 | 267 22 | Uttarā-Ashādhā ... | Āshādhā. |
| 1800 Phālguna śukla 6 | 27th February, 1879 | 302 46 | Dhanishthā | Śrāvaṇa |
| 1801 Phālguna kṛishṇa 10 | 4th April, 1880 | 339 0 | Uttarā-Bhādrapadā .. | Bhādrapada |
| 1803 Vaiśākha śukla 12... .. | 11th May, 1881 | 15 30 | Bharanī | Āśvina |

From this Table III. it will be seen that from one rising of Jupiter to another, the motion of the planet amounts to from 30 to 36 degrees. By the systems of unequal spaces, some months, and the *saṃvatsaras* which are named from them, have the average space of one and a half *nakshatras*; that is, about 20 degrees only; they are Mārgaśīrsha, Māgha, Chaitra, and Jyēsthā; and these are the *saṃvatsaras* that are most apt to be omitted. For example, in Śaka-Saṃvat 1780 expired, when Jupiter rose, he was in Rôhīṇī. The following rising took place in Punarvasu; that is, from the first rising, he passed entirely through Mṛiga and Ārdrā, before the next rising occurred. And, therefore, Mārgaśīrsha was omitted. Again, by these two systems, Śrāvaṇa contains the average space of two *nakshatras*; that is, about 26 degrees, 40 minutes; and, therefore, it also is liable to be omitted. Kārttika, Pausha, Vaiśākha, Āshāḍha, and Āśvini contain the average space

of two and a half *nakshatras* each; that is, about 33 degrees; and will but rarely be omitted. And Phālguna and Bhādrapada, containing not less than 40 degrees each, will never be omitted. So also, by the system of equal spaces, the nine months that contain two *nakshatras* each (excluding Abhijit), are sometimes likely to be omitted. But the remaining three, *viz.* Phālguna, Bhādrapada, and Āśvina, containing three *nakshatras* each, will never be omitted.

On the other hand, sometimes it is possible that a *saṃvatsara* may be repeated. By either system of unequal spaces, this may happen in respect of Kārttika, Pausha, Phālguna, Vaiśākha, Āshāḍha, Bhādrapada, and Āśvina; but, by the system of equal spaces, only in respect of Phālguna, Bhādrapada, and Āśvina. And, whenever a *saṃvatsara* is repeated, then two *saṃvatsaras* will be omitted in the same cycle, one, under ordinary circumstances; and one, on account of the repetition.

(To be continued.)

CHAMBA COPPER-PLATE INSCRIPTION OF SOMAVARMADEVA AND ASATADEVA.

BY PROFESSOR F. KIELHORN. C.I.E.: GÖTTINGEN.

I edit this inscription from two rubbings, supplied to me by Mr. Fleet, to whom they were made over by General Sir A. Cunningham. According to the information furnished to me, the original inscription was discovered in the State of **Chambā**, or **Champā**,¹ in the Pañjāb, but I am unable to ascertain where it is at present. The two rubbings just suffice for editing, but they are, I regret to say, useless for photographing.

The **plate** is a single one, inscribed on one side only, measuring about 17½" broad by 12" high. To judge from the rubbing, a small piece of the upper proper left corner of the plate is broken away, causing the loss of about five *aksharas* at the end of line 30, and of about three *aksharas* at the beginning of line 31; otherwise the plate appears to be well preserved; and, with the exception of a few *aksharas* which are indistinct in the impressions, the inscription is legible with certainty. There is no indication in the rubbing that the plate contains a hole for a **ring** with a **seal** on it.

The **inscription** consists of 32 lines. Of these, lines 1-28 are full lines, covering the whole breadth of the plate. Line 29 is written regularly below line 28, but fills only about two-thirds of the breadth of the plate, beginning below the word *likhitam* of line 28. Line 30 is written in continuation of line 29 up the proper left margin of the plate, line 31 on the top-margin above line 1, and the short line 32 down the rather broad right margin, which also contains, in somewhat large letters, the names of the two sovereigns by whom the grants recorded in the plate were made.

The average **size** of the letters is between $\frac{3}{16}$ " and $\frac{1}{4}$ ".—The **characters** belong to the northern class of alphabets and bear (with the exception perhaps of the signs for *ja*, *bha*, *ra*, *va*, and the initial *ē*) in every respect a most remarkable resemblance to the characters of the Śāradā alphabet, as written, *e.g.*, in the Bhūrjapattā MS. of the *Kāśikā-Vṛtti*, which was brought by Dr. Bühler from Kāśmīr, and is now in the Deccan College.² The sign for the *Jihvā-*

¹ See *Archæol. Survey of India*, Vol. XIV. p. 109.

² So far as I can judge, it would be impossible to

determine the age of the inscription, even approximately, from the characters in which it is written.

mūliya, which occurs in *ḍēcah kuṣālī*, line 13, and *yah ka-*, line 24, and that for the *Upaṭh-māniya*, which occurs in *-viśvaḥ Purādrīh*, line 2, *-prakṛitīh prativāsi-*, line 15, and *dharmaḥ pālānāt*, line 25, show exactly the same forms as in the Śārada alphabet. The numerals 1, 2, and 5 are denoted by the ordinary numerical figures resembling closely the figures used in Śārada MSS.; but the numeral for 4 is throughout, both when used by itself and as the latter portion of 14, denoted by a symbol resembling the symbol for 4 employed in Jaina palm-leaf MSS.—The language is Sanskrit, and, excepting two verses in honour of the gods Brahman, Viṣṇu, Śiva, his consort Bhavānī, and Gaṇeśa, at the beginning, one verse giving the names of the deities to whom the greater part of the grant was made, in lines 23 and 24, and four of the customary benedictive and imprecatory verses, in lines 24-27, the inscription is in prose. From a grammatical point of view I may draw attention to the employment of the Instrumental case *Śukravārāṇa*, in line 27, instead of the Locative *Śukravārē*, and to the position of the numeral in *bhūmāśhuka-chaturṇām*, line 29, and in *ḍēca-dvayōh*, line 30, which is not uncommon in Sanskrit inscriptions of the middle-ages.³ The Sanskrit of the genealogical part of the inscription, up to line 13, is unobjectionable.—In respect of orthography I would notice the occasional employment of the *Jihvāmūliya* and *Upaṭhmāniya* in the passages mentioned above; the use of the dental for the palatal sibilant in *Kulūtēsvara* and *sākhinōh*, line 5, *isīcī*, line 8, *asēsha-sūstrārtha*, line 11, *paramēśvara*, line 12, and *dandapāsika*, line 15; the employment of the guttural nasal instead of the *anusvara* in *vañśe*, line 24; and the fact that *ba* is everywhere denoted by the sign for *ca*.

The inscription may be divided into two parts, the first of which extends from line 1 up to the words *Viśvaḥ* in line 28, while the second comprises the short remaining portion up to the end.

The first portion is dated, in line 27, on Śukravāra or Friday, the second lunar day of the light half of Vaiśākha, in the first year in the augmenting auspicious reign of victory of

the illustrious **Āsaṭadēva**; and it records that the devout worshipper of Brahman, the *paramabhāṭṭāraka mahārājādhirāja paramēśvara*, the illustrious **Sōmavarmadēva** (evidently the immediate predecessor of Āsaṭadēva), from his residence at the glorious **Chanpakā**, made grants of land, etc., to certain temples of the gods Viṣṇu and Śiva, as will be shown below. The *dūta* or 'messenger' for these grants was the *mahākṣhapatalika* or 'great keeper of records,' the illustrious Kāhuka (line 28); and this portion of the inscription as well as the concluding one was written by the *karṇakūtyasthas* or 'writers of legal documents' Śiva and Pamanna (lines 28 and 32).

In lines 3-13, **Sōmavarmadēva**, the grantor, is described as meditating on the feet of the *paramabhāṭṭāraka mahārājādhirāja paramēśvara*, the illustrious **Sālavāhanadēva**, and as the son of the *paramabhāṭṭārikā*, the *mahārājñā*, the illustrious **Rardhadēvi**; and it is recorded of him that he was born in the spotless family of the illustrious **Sahilladēva**, the great jewel to adorn the **Paushaṇa vañśa** or solar race, who had acquired for himself such names as **Sāhasāṅka**, **Nissāṅkamalla**, and **Maṭamaṭa-simgha**; "who was a new cloud to extinguish in a moment the mighty blazing fire of the **Kira** forces, fanned, as by the wind, by the **Durgara** lord assisted by the **Saumatika** . . .; whose alliance was humbly sought by the ruler of **Trigarta**, subdued by force; who was asked the favour of bestowing royalty, in return for services rendered or to be rendered, by his kinsman the lord of **Kulūta**, anxious to render him homage; who by the weight of battle had broken, like a wide-spreading tree, the large force of the **Turushkas**, on whom wounds had been inflicted;" and who, by destroying in **Kurukshētra** the array of the elephants of his enemies, had acquired for himself the name of **Karivarsha**.

I may state here at once that the mention of **Sālavāhana**, the predecessor of **Sōmavarmadēva**, and of **Āsaṭadēva**, his successor, enables us to fix with certainty the approximate date of the grant. According to the *Rājatarāṅginī*, vii. 218, the Kaśmīrking **Ananta** uprooted the king **Sala** of Champā; and according to

³ Compare e. g. *baladāsa*, *śiśu-sādhya*, and *sabaka* in the plate of Mahānavarmadēva of Vikrama-Saṃvat 1190, *ante*, page 207. Similarly, in the Basa-

plate of Gōvindachandra of Vikrama-Saṃvat 1161, *ante*, Vol. XIV, page 103, line 8, we must clearly alter *saba-saka* to *sahas-saka*.

vii. 589 of the same work, *Āsaṭa*, the *Châmpēya*, was one of a number of tributary chiefs who presented themselves at the court of the king *Kalaśa* of *Kaśmīr*. As the first-mentioned event is placed by Sir A. Cunningham* between A. D. 1028 and 1031, and the second⁵ in A. D. 1087, and as *Sāla* and *Āsaṭa* are clearly the two princes *Sālavāhana* and *Āsaṭa* of our grant, the grant must have been made between those two dates, or about the middle of the 11th century.—The traditional list of the *Chambā Rājas* given in *Archæol. Survey of India*, Vol. XIV. pp. 114 and 115, identifies *Sāla* with *Sōila* or *Sahila*, the *Sāhilladēva* who in our grant is described rather as the founder of the family; and it has between *Sāla* and *Āsaṭa* no less than five princes, none of whom is called *Sōmavarmadēva*.—Some of the peoples mentioned in the grant in connection with *Sāhilladēva* can be readily identified. *Trigarta*, according to Sir A. Cunningham,⁶ is the name of the country between *Kāṅgrā* and *Jālandhar*, to the south of *Chambā*; and *Kulūta*, the district of *Kullū*,⁷ to the south-east of *Chambā*. The *Kīras* have by some been identified with the *Kaśmīrīs*, but in the *Bṛīhatsaṃhitā*, xiv. 29 they are separately enumerated, as a people inhabiting the north-east, together with the *Kaśmīras*.⁸ About the *Durgara* lord and the *Saumatika*, with whom the *Kīras* would appear to have been allied, I have not been able to collect any information, but it does not seem impossible that *Durgara* may be identical with *Dōgrā*, which by Sir A. Cunningham is given as a name of the country including “*Jammu* and the other petty States between the *Jehlam* and the *Rāvi*.”⁹ The allusion to *Sāhilladēva*’s victory over the *Turushkas* or *Muhammadans*, probably has reference to the repulse of one of *Sultān Maḥmūd*’s invasions at the beginning of the 11th century.¹⁰

Sōmavarmadēva, being about to make a grant, in lines 13-15 of the inscription addresses himself in the usual manner to the various officials of his dominions and to the inhabitants of

the districts concerned. The number of officials mentioned is unusually large, and reminds one of the lists of officials given in the *Āmgāchhī* and *Bhāgalpur* plates.¹¹ The individual functions of every official named are by no means clear, and I would point out that I have not found the office of *cārayātrika*, line 14, mentioned in any other grant which I have studied.

The objects granted are in lines 16-21 stated to be 15 *bhūmi* or *bhū* of land, and a yearly gift of one *khūrī* of grain from the granary at *Bhadravarma*, the said 15 *bhūmi* of land being made up as follows:—

1. In the *Pānthila maṇḍala*,—

- (a) 4 *bhūmi* belonging to *Kulōṭi*, described as being in the enjoyment of the *mahārājñī* *Rarīḥā* (the mother of the grantor);
- (b) in *Muṅgala*, 2 *bhūmi*, situated in *Sūpa-kīra-surambhaṭa*;
- (c) in *Vāṭa*, 2 *bhūmi*, situated in *Chhōnnē-raka-gōshṭhika*.

2. In the *Tāvasaka maṇḍala*,—

- (a) in *Bhadravarma*, 1 *bhū*, situated in *bhadravakāśīya-Vijjanla*;
- (b) in *Sarāhula*, 1 *bhūmi*, situated in *Bhaṭṭavasanta*;
- (c) in *Ḍhālyaka*, 2 *bhūmi* in *Lartuka*, belonging to *Dēnnasuta*; and 2 *bhū* in *Jauḍhaka*, belonging to *Rāmajjēyasuta*;

3. In the *Pārakamaṭa maṇḍala*,—

- in *Maṅgala*, in *Ḍhaullēkī*, 2 *bhūmāshaka* belonging to *Lutthukasuta*, and 2 *bhūmāshaka* belonging to *Hurtākasuta*, these 4 *bhūmāshaka* being equal to 1 *bhū*.

Or, in figures, 4 *bhū* in *Kulōṭi*, 2 *bhū* in *Muṅgala*, 2 *bhū* in *Vāṭa*, 1 *bhū* in *Bhadravarma*, 1 *bhū* in *Sarāhula*, 4 *bhū* in *Ḍhālyaka*, and 1 *bhū* in *Maṅgala*;—total 15 *bhū*.

There are several things in the passage of which the above is an abstract, which I am unable to explain satisfactorily; others, about

* *Ancient Geography of India*, Vol. I. page 111. The doubts expressed by Lassen, *Indische Alterthumskunde*, Vol. III. page 1651, regarding the existence of a king named *Sāla*, are by our grant shown to be groundless.

⁵ *Archæol. Survey of India*, Vol. XIV. p. 106.

⁶ *Ancient Geography of India*, Vol. I. page 136.

⁷ *ib.* page 112.

⁸ See Hall, in *Journal Am. Or. Soc.*, Vol. VI. page 529.

⁹ *Ancient Geography of India*, Vol. I. page 130.

¹⁰ In the genealogical part of the grant I am unable fully to explain the epithet applied to *Sāhilladēva* in line 9, according to which he had his extraordinary expanded sparkling might proclaimed by the venerable holy god *Sūtrakasvāmin*. I suspect that *Sūtrakasvāmin* is a local name of the god *Vishnu*, in honour of whom *Sāhilladēva* may have founded a temple.

¹¹ *ante*, Vol. XIV. page 167, and Vol. XV. page 306.

which I am doubtful. The term *bhūmi* or *bhū* I take to be a measure of superficial area, and from line 19 it is clear that the *bhūmi* or *bhū* was sub-divided into four *māhaka*. But I do not see the exact force of the term *sīt* prefixed to *bhūmi* and *bhū* in lines 16, 17, and 18; and, similarly, I cannot explain the term *ashṭapāhārika* which occurs twice in line 18, and again below in line 31: nor the phrase *sakhilam pakhilam* in line 20.—As regards the territorial names, it appears that the realm of Sōmavar-madēva was divided into *maṇḍalas*, and that the names Kulōḥi, Muṅgala, Vāṭā, Bhadravarman, Sarāhala, Dhadyaka, and Maṅgala, denote certain sub-divisions of the three *maṇḍalas* Pānthila, Tāvāsaka, and Pārakamata mentioned. The remaining terms Śapākāra-surambhuta, Chhōmūraka-gō-bhika, etc., I would regard, judging merely from the wording of the text, as names of villages. But on the very imperfect maps at my disposal I have not been able to identify any of the places or districts enumerated, with the exception of Bhadravarman, which would seem to be the **Bhadrwār** of the maps, to the north-west of Chambī.—Finally, as regards this portion of the inscription, I would draw attention to the fact that the owners of the land concerned, where they are mentioned at all, are not called by their own proper names, but described as the sons of their respective fathers—Dēnna-suta, 'the son of Dēnna,' Rāmājṇeya-suta 'the son of Rāmājṇeya,' etc. The same practice is observed in the concluding portion of the inscription, lines 29 and 31.

Of the 15 *bhūmi* of land described, two *bhūmāshaka* or half a *bhūmi*, according to lines 21-24, were granted by the king, as an *agrahāra*, to a temple of Viṣṇu erected in honour of (?) the *mahārājaputra*, the illustrious **Āsaṭa** (?): and the remaining land, as well as the yearly contribution of grain, was given, as an *agrahāra*, jointly to the gods Viṣṇu and Śiva, who must have been worshipped in one temple, the former in honour of the illustrious **Lakshmanavarman**, and the latter, an image of whom had been set up by the queen Rardhā, in honour of the illustrious **Sālākavarman**. The first line of the verse (line 23) in which the two gods are mentioned, is not quite clear to me; as regards the remaining portion of the verse, I take Sālākara-

varman to be another name of Sālāvāhana, the husband of Rardhā and father of Sōmavar-madēva. The temple to which this chief part of the grant was made, I would suggest to be the temple of Lakshmi-Nārāyaṇa, "referred to the time of Rāja Sāla Varmma," which is mentioned in *Archæol. Survey of India*, Vol. XIV., pages 113 and 114, and which, to judge from the legend mentioned by Sir A. Cunningham, appears to have been devoted to the worship of Viṣṇu and Śiva.

The second portion of the inscription, from *Atra punar api likhyatē* in line 28 up to the end, is dated ten years later than the preceding portion, i.e. in the 11th year of the reign of **Āsaṭadēva**, on the 12th of the light half (?) of Bhādrapada; and it records various minor alterations of the previously recorded grant, the main import of which appears to be that, instead of the four *bhūmāshaka* in **Maṅgala**, in the **Pārakamata** *maṇḍala* mentioned before, four other *bhūmāshaka* were given to the temple of the two gods Viṣṇu and Śiva, and that one *bhū* of land in **Ghalahāṇa**, in the **Pānthila** *maṇḍala*, was given to the before-mentioned temple of Viṣṇu (?).

The whole grant bears the subscription: "the own hand of the illustrious **Sōmavar-madēva**; the own hand of the illustrious **Āsaṭadēva**."

I may add here that, together with the above inscription, Mr. Fleet has sent to me two impressions of another **Chambā copper-plate** inscription, also received from Sir A. Cunningham, which will be referred to in notes 31 and 32 below. This inscription also is on a single plate, measuring 10 $\frac{3}{4}$ " by 7 $\frac{3}{4}$ ". It consists of 16 full lines and one short line, engraved on the proper right margin, and containing the subscription of the grantor. Its characters are virtually the same as those of the grant here edited. It is throughout in prose, and it records, in Sanskrit which is not always correct, that the devout worshipper of Brahman, the *mahārāja*, the illustrious **Bhōṭavarmadēva**, who meditated on the feet of the *paramabhāṭṭāraka*, the *mahārājādhirāja*, the illustrious **Manikyavarman**, and who was the son of the *paramabhāṭṭāraka*, the *mahārājān*, the illustrious **Ju[rū?]radēvi**, from his residence at **Chanpaka**, granted certain lands belonging to

the village Jūṅgurāra, in Kōshtagrāhara, in the Chaturāha maṇḍala, to an individual of the Kāśyapa gētra. So far as I can make out, this grant contains no date of any kind.

The princes Maṇikyavarman and Bhōṭa-

varmadēva are evidently No. 44 and No. 45 of the genealogical list of the Chamba Rājas, placed by Sir A. Cunningham (*Archæol. Survey of India*, Vol. XIV. page 115) in A.D. 1490 and 1425.

TEXT.¹²

- 1 Ōm¹³ namaś=Śivāya | (||) Jayati¹⁴ bhuvana-kāraṇaṁ Svayambhūr=jayati Purandara-nandanō Murārīḥ [1*] jayati Girisūtā-niruddha-dēhō durita-bhay-āpaharō Hara-
- 2 ś=cha dēvaḥ || Jayati¹⁵ janam=anishtād=uddharanti Bhavānī jayati nija-vibhūti-vyāpta-viśvaḥ=Purārīḥ [1*] jayati cha Gajavaktras=sō=tra yasya prasādād=uparamati
- 3 samastō vighna-varg-ōpasargah || Śrī-Chanpakā¹⁶-vāsakāt=parama-vra(bra)hmaṇyō lalāṭa - tata-ghaṭita - vikaṭa - bhrūkuṭi- prakāṭa-kuṭita-kaṭaka-[S]aumatika-kṛita-sānā-thya-Durga-
- 4 rēśvara-samīra-sandhukshita-Kīra-va(ba)la-va(ba)lavād-dav-āśusūkshaṇi-kshaṇa-kshapaṇa-[na]va-jaladharasya¹⁷ daṇḍ-ōpanata-Trigartādhip-ānunaya-prārthita-sandhānasya | sēvā-vidhi-vyagra-
- 5 svakulya-Kulūtēśva(sva)ra-karma-vyatihāra-prārthyamāna-rājyātpa(rpa)ṇa-prasādasya | samara-bhara-bhagn-āruṇārushka-Turushka-vipula-va(ba)la-viśāla-sā(sa)khina[h] | Kurukshētrē Rāh-ūparā-
- 6 ga-samaya-samarthita-mada - gandha - luvdha(bdha)-madhukara-kul-ākula-kapōla-phalaka-kari-ghaṭā-dāra-prīti-prasanna-mānasa-bhagavad-Bhāskar - ābhinandita-nij - ānvaya-prasūti-
- 7 paramparā-sāra-Karivarsh-ābhīdhān-ābhyudayasya tatkāla-milita-nikhila-mahīpāla-mukha-maśī-kūrchikā-kīrti-surabhita-sapta-bhuvan-ābhōgasya niratīsa-
- 8 ya-śaury-audāry-āgādha-gāmbhīrya-maryādā-dayā - dākshīnya-vailakshanya - jarjarita-Jāma-dagnya-Si(Śi)vi-Karṇa-Yudhishṭhir-ādi-pravara-prasiddhēḥ darśana-saphalita-lō-
- 9 ka-lōchana-manōrama-mū[rtēḥ]¹⁸ bhagavach-chhri-Śūdrakasvāmi-dēva-prakhyāpya[mā]¹⁹n-ānanyasāmānya-sphāra-sphurad-uru-mahimnāḥ samara-sahasra-saṁvidhāna-kōp-ārjita-
- 10 Sāhasāṅka-Nissāṅkamalla-Maṭamaṭasimgh-ādy-āpara-paryāyasya | Pausaṇa-vē(vam)²⁰ śa-bhūshaṇa-mahāmaṇḍh śrīmat-Sahilladēvasya | nirmalē kulē tila-
- 11 ka-bhūtaḥ niravadya-vidyā-vinōda-rasa-rasika[h] | asē(sē)sha-sā(śā)strārtha-parimal-ādhivāsita-mānasah vivēk-aika-sarō-rājahamsah aganīta-vimala-guṇa-gaṇ-ā[la]²¹n-kṛi-
- 12 ta-mūrtiḥ tribhuvana-bhavana-vi[ch*]chhūrta-kīrtiḥ paramabhaṭṭāraka-mahārājādhirāja-paramōśva(sva)ra-śrīmat-Sālavāhanadēva-pādānudhyātah paramabhaṭṭārikā-mahā-rājā-śrī-Rardhā-
- 13 dēvī-kukshi-kshūranīranidhi-sudhādīdhitih paramabhaṭṭāraka-mahārājādhirāja-paramēśvara-śrīmat-Sōmavarmadēvaḥ=kuśālī | sarvān=dēva niyōgasthān rāja-rājānaka-rāj[ā*]-
- 14 mātya-rājā(ja)putra-parikara-saṁniyuktaka-viniyuktaka-dūta-gamāgamika-bhītvaramānya²² khaśa-kulika-śaulkika-gaulika - khaḍgaraksha - ²³ tarapati-²⁴vīrayātrika-chaurō-

¹² From the rubbing.

¹³ Expressed by a symbol.

¹⁴ Metre, Puṇyāgrā.

¹⁵ Metre, Mālinī.

¹⁶ *Chāpaka*, instead of *chāmpaka*, according to Professor Pischel, is the ordinary spelling of Śrāda MSS. See Solf, *Kosmār Rezension der Pañcāśikā*, page 29.

¹⁷ Here and in other places below, which it is unnecessary to point out separately, the sign of punctuation is superfluous.

¹⁸ At first sight this *akshara* looks like *rti*, and this was no doubt originally engraved; but a careful examination shows that *rti* has been altered to *rtēḥ*.

¹⁹ This *akshara*, which originally was omitted, is written below the line.

²⁰ The *akshara* *vē* appears to have been altered already in the original, but I cannot recognize in the rubbing what is written above *vē*. Below, line 24, *va. śi* is written *vausa*.

²¹ This *akshara*, which originally was omitted, is written above the line.

²² I do not venture to alter this or any of the other terms, which are perfectly plain in the rubbing. The *Āmṛāchhi* and *Bhāgalpur* plates, *ante*, Vol. XIV. p. 167, line 30, and Vol. XV. p. 306, line 35, have *gamāgamika* | *abhitvaramāna* |.

²³ The *Āmṛāchhi* plate has, line 29, *aiṅgaraksha*, and the *Bhāgalpur* plate, line 34, *khaḍgaraksha* instead.

²⁴ The two plates mentioned before have *tarika*, lines 30 and 36.

- 15 ddharanika-[dā]ṇḍika-daṇḍa[p]āsi(śi)ka-vrā(brā)hmaṇa-[kshatriya]-²⁵viṭ-**chhûdr-âdi**-[s]āshṭā-daśa-prakṛitīḥ=prativāsi-janapadānś=cha samājñāpayaty=astu vas=samviditām yathā sva-śāsyamāna-sha(chehha ?)²⁶trā-
- 16 bhôgê **Pānthila**-maṇḍala-prativa(ba)ddha-mahārājñī-śrī-**Rardha**-dēvyā²⁷ bhuchya(jya)māna-**Kulôṭi**-satka-bhūmayas=chataśraḥ tathā **Muṅgalê** Sūpakāra-surambhata-sṭhitā sīt bhūmi-dvayaṁ | tathā
- 17 **Vaṭayām** Chhōnnēra-ka-gōshṭhika-sṭhitā sīt bhūmi-dvayaṁ tathā **Tāvasaka**-maṇḍala-prativa(ba)ddha-**Bhadravarmê** bhadravakāśiya-Vijjaula-sṭhitā sīt bhūr=ekā | tathā **Sarāhulê**
- 18 Bhaṭṭavasanta-sṭhitā sīt-bhūmir=ekā tathā **Phālyakê**=shṭaprahārika-Dēnnasuta-satka-Lartukê bhūmi-dvayaṁ tath=ātr=aiva dviṭiy-āshṭaprahārika-Rāmajjēyasuta-satka-Jau[dha]kê bhū-dvayaṁ tathā **Pā[ra]**²⁸.
- 19 **kamaṭa**-maṇḍala-prativa(ba)ddha-**Maṅgalê** Dhauḷlêkâyām Lutthukasuta-satka-bhūmāshaka-dvayaṁ tathā Hu²⁹[rtā]kasuta-satka-bhūmāshaka-dvayaṁ=ubhau samśu[ddha]-³⁰bhūr=ek=āṅkataḥ **Kulôṭi** bhū 4 **Muṅgalê** bhū 2 **Vaṭayām**
- 20 bhū 2 **Bhadravarmê** bhū 1 **Sarāhulê** bhū 1 **Phālyakê** bhū 4 **Maṅgalê** bhū 1 ēvaṁ bhū 15 ēvaṁ pūrvaprasiddha-bhukti-pramāṇēna svasīmā-triṇa-gōyūthī.³¹gōchara-paryantaṁ sakhila[m]³² pakhilam sa-nirgama-pravēśam
- 21 sa-vanaspaty-udakam griha-śāka-vāṭikā-vīkshārāma-vīśrām-ōpētaṁ tathā **Bhadravarma**-kōshṭhāgarāt=prativarshaṁ dhānya-khāry=ek=āṅkataḥ dhānya-khā 1 atō madhyāt=**Pārakamaṭa**-**Maṅgala**-mārgāl=Lutthukasu-
- 22 tiya-bhūmāshaka-dvayaṁ=atr=aiva mahārāja-putra-**[śrī-Ā]**³³**saṭasy**=ōddēśēna pratishṭhāpita-bhagavad-Vishṇavō agrahāratvō iti pratipāditam pānya³⁴ bhū 14 mā 2 (?) dhānya-khā 1 ā-chandr-ārkam=anā-
- 23 chehḥōḍyam=ahāryam=anupadravam agrahāratayā tōya-chuluk-āpūra-pūrvakam || Śrīmal-³⁵**Lakshmanavarmanas**=śubhavadā-prā[khyê] vibhur-yō Hariś=śrī-**Silākara**-varmanê cha śiva-kṛid=vāṇ-ārchitō ya-
- 24 Ś=Śivah [i*] dēvy=āsmīn=parabhakti-bhūvita-dhiyā śrī-**Rardhaya** sthāpitas=tābhyām dattam=idam=mayā nanu janais=sarvair=anujñāyatām || Tathā cha Vyāsa-bhāshitam [ii*] Asmīn=³⁶vañśē(mē) su-vistṛṇē yalī=ka-
- 25 śchin=nṛipatiḥ=bhavēt [i*] tasy=āham hasta-lagnō=smi śāsanaṁ mā vyatikramēḥ || Pālanāt=paramō dharmah=pālanāt=paramam tapah [i*] palanāt=param-aśvaryaṁ garīyas=tēna pālanam || Anyāyēna
- 26 lṛitā bhūmir=anyāyēna tu hāritī | harantō³⁷ hārayantaś=cha dahaty=ā-saptamaṁ kulam || Tādīkānā[m]³⁸ sahasrēṇa āśvamēdha-satēna cha | gavām kōṭi-pradānēna bhūmi-hartā
- 27 na śuddh[y*] ati || Pravardhamāna-kalyāṇa-vijaya-rājyō śrīmad-**Āsaṭadēviyō** samvat-sarē prathamē Vaiśākha-sita-[dvi]³⁹tiyāyām Śukravārēṇa paṭṭakam=idam saṁpādi-

²⁵ This word, which originally was omitted, is written below the line.

²⁶ I am almost certain that the original *akshara* has been struck out, and that *chehha* has been engraved below it. With *chehharabha* 'the expanse of the royal umbrella,' we may compare such expression as *chehharabha*, *ante*, Vol. VIII. p. 214, l. 7, translated by 'internum.'

²⁷ This should properly be *devi-bhujamāna*.

²⁸ Originally *Pāra*.

²⁹ Originally *saṁsiddha*.

³⁰ The ordinary spelling of the last portion of this word is *pāṇi*, but this inscription and the unpublished Chunda grant of Bhōjavarmadēva have distinctly *yān*.

³¹ This *Anyāyēna* is somewhat indistinct; but the unpublished grant mentioned in the last note has clearly *śachchāyēna* [*śachchāyēna*]. I have not met with the expression anywhere else and am unable to explain it.

³² I am very doubtful, especially about the second *akshara* in brackets. So far as I can judge from the rubbing the original reading would seem to be *śrīpā*; but the second of these two *aksharas* has been altered, and the *i* of *śrī* also may have been struck out. It is not impossible that the right reading may be *śrī-Āsatasg*.

³³ This word is plain in the rubbing, but I cannot explain it; of course, it is easy to say that it may be a mistake for *anta* or *ant*. The following *bhū 14 mā 2* I take to mean '14 *blema* and 2 *maska*'; but the figure 2 is indistinct in the impressions.

³⁴ Metre, *Sārdūlavikrīṭita*.

³⁵ Metre, *Shloka* (Anu-*hūb*); and in the following three verses.

³⁶ Read *haratō hārayantaś=cha*.

³⁷ So this word is spelt e.g. also *ante*, Vol. XIII. p. 78, line 24.

³⁸ The *akshara* in brackets looks like *tri*, altered to *dvi*.

- 28 tam [H*] Dūtō=tra mahākshapaṭalika-śrī-Kābukah || Likhitam=idam karaṇa-kāyastha-Śiva-Pamannābhyām || Iti śubham [H*] Atra punar=api likhyatē [I*] Yathōpari-
- 29 likhita-**Pāṛakamaṭa-Maṅgalē** bhūmāshaka-dā(cha)turpām parivartē tatr=aiva Savarmikasutānām satka-bhūmīpra(sha)kā=chatvārah
- 30 aṅkataḥ bhūmā 4 agrahāratvē vibhāgē dēva-dvayōḥ pa[ra?]-samvat 11 Bhādra-pada-[śubhr?]-ē 12 [sa?] - - - - 40
- 31 - - - 41 varē dattam **Pānthila-maṇḍala-pratīva(ba)dha-Ghalahaṇē** Mahēndrakapō(pau)tra-Mantrika-suta-satka-bhūr=ek=āṅkatō bhū 1 ashtaprah[ā*]rika-sarva[—?] - tr[ai?]va [dē]va-grihē pratip[ā*]dita | prāu(g)-lē(li)khita-kram[ē*]ṇa pālani[ya]m [I*]
- 32 [Li*]khitam Śiva-Pamannābhyām=dēva | (H) Śrīmat-**Sōmavarmadēva**-svahastah || Śrīmad-**Āsaṭadēva**-svahastah [H*]

FOLKLORE IN SALSETTE,

BY GEO. FR. D'PENHA.

No. 2.—*The poor boy who went in search of Īsvara.*

There once lived an old woman with her **only son**, whose occupation was to take out other people's cattle to graze, for which he received a very meagre remuneration; and this was their only source of maintenance. Poverty stared them in the face. Very hard indeed was their lot; hard to such an extent that they had very often to be content with only one meal a day. Things continued in this state for some time till at last it became unbearable, and the boy determined to **seek out Īsvara**, and ask him why of all mankind he alone had to endure such misery.

Accordingly he one day told his mother of his intention and asked her to make him enough bread to serve him for several days. The old woman, as ignorant as himself, prepared some *bājri* cakes, and giving them to him, bid him a loving adieu, wishing him every success.

Taking the cakes and an axe, the boy started in search of Īsvara. He walked on and on till night overtook him, and he sat under a jack-fruit tree, and partaking of his coarse fare went to sleep. At dawn, when he was leaving the place, the tree detained him and asked him where he was going. The boy told the tree the object of his journey. Whereupon **the tree said** :—

“Well, if you are in search of Īsvara do me a favour. If you should happen to meet with

him tell him it is now **twice twelve years** since I have stood here, but so far I have not borne a single fruit.”

The boy promised to give the message; and the better to remember it **he tied a knot on a rope** which he had with him, and started on his errand.

He walked another whole day, and night coming on he partook of his *bājri* cakes and rested himself under a mango tree. In the morning he arose and as he was going away **the tree asked him** where he was going, and on being told it exclaimed :—

“Tell Īsvara for me that for **twice twelve years** I have been standing here, bent down with the burden of my fruit, but not one living creature will touch, much less eat, any of it.”

The boy said he would do it, **tied another knot** on the rope, and pursued his journey. He walked with rapid strides for another whole day and by dusk entered a city and there passed the night after eating some of his cakes. At day-break he saw a big tank under construction. It was being built by the king of that place for the benefit of his subjects, but to his great grief it could not be completed, for no sooner was one side built and the other commenced than the first would break down, and by the time it was rebuilt the other would give way; and so had it continued for twenty-four years. The boy seeing the king very sad, asked him the reason and the king told him,

⁴⁰ Here about five *aksharas* are missing.

⁴¹ Here two or three *aksharas* are missing.

and in turn asked where he was going. He told him everything, whereupon the king said:—

“Do take my message, too, to Ísvara. Tell him I have been **twice twelve years** building a tank for the good of my subjects, but it has not been completed. Ask him the reason why, and what I should do.”

The boy said he was at His Majesty's service and would do everything the king told him. And he again started; but before he left he made a **third knot** on the rope lest he should forget.

For a fourth day our hero walked on and on till late in the evening, by which time he had reached a certain shore. Being very weary and hungry he ate what little remained of his *bájrí* cakes and slept soundly till break of day.

When he woke up the next day he saw at a little distance an enormously big *manghal-músá* (fish) stretched on the dry land. On approaching him he questioned the boy as to where he was going, and he told him that he was in search of Ísvara. Thereupon the whale said:—

“If you happen to meet with Ísvara, do not forget me. Tell him it is **twice twelve years** since I was thrown on this shore, and since then not a single tide has come within my reach to enable me to get into the sea again.”

The boy made a promise to the whale to mention him to Ísvara, and made a **fourth knot** on the rope. He then rushed into the sea, little recking the roaring of the waves, when lo! a **passage opened out** for him and he was enabled to proceed on his way. He walked a long while and came to a house, at the entrance of which, on the sixth step, was seated an ascetic, in whom the boy did not recognize the object of his search, for he was **Ísvara himself**, who pitied the boy and had come to aid him. Ísvara questioned the boy as to who he was and what he wanted in that place. The boy said:—

“O holy saint, tell me, if you can, where I can find Ísvara.”

“What do you want from Ísvara? Tell me all, and I will try and help you.”

Upon this the boy related his story, and how he had journeyed for several days to seek Ísvara, and beg of him to better his condition!

Ísvara bade him go home and said he would now live in a better position. Hearing this the boy went down from the fifth to the fourth step, when Ísvara detained him and asked him if he had anything else to say. Just then the boy **remembered his promise** to the whale, and told Ísvara how for twice twelve years he had been lying on dry land and how he was longing for a tide to come and take him back to his mother, the ocean.

On this Ísvara told the boy to tell the whale that he had in his belly a box containing very **precious gems**, and that if he would throw up that box and give it to the first passer-by, the tide would come and carry him back into the sea.

The boy heard these words and went down to the third step when Ísvara again detained him and asked him if he had nothing else to say; whereupon he remembered the king who was building the tank, and said:—

“There is a certain king who says he has spent twice twelve years in constructing a tank for the benefit of his subjects; but to his sorrow as soon as one side is built and the other commenced, the first side breaks down, and by the time it is rebuilt the other side gives way, and so it has continued for twice twelve years. He wants to know what he should do to complete the tank.”

Upon this Ísvara said:—“Tell the king that if he has the welfare of his subjects at heart, he he must risk **half his kingdom** by bestowing it on the first passer-by, and also **give him his daughter** in marriage, and then only will the tank be completed.”

The boy then stepped on to the second step when Ísvara asked him for the third time whether he had to give him any other message, and this time he was put in mind of the mango-tree, and said:—

“In a certain forest stands a mango-tree bent down with the load of its fruit, and it complains that it has been in that position for twice twelve years, but no living creature eats of its fruit.”

The boy was ordered to tell the tree that at its foot was buried a box containing **great treasure**, which box the first passer-by should be allowed to dig out and take away, and then its fruit would be eaten.

He came down to the first step and he was again stopped by Ísvara and asked if he had no more to say, and he thought of the jack-fruit tree. He said :—

“At a great distance from here grows a jack-fruit tree which has been in existence for twice twelve years, but unfortunately has borne no fruit through all this long period.”

Upon this Ísvara said :—“In the trunk of the tree is hidden an immense quantity of gold, which if the tree gives up to the first passer-by, it will produce fruit abundantly, such as its kind has never borne.”

Hearing this the boy left. He was asked over and over again if anything more was to be said, but he replied in the negative, and took leave of the supposed holy man.

When he had passed the sea, which closed up after him, he came on the whale to whom he told what Ísvara had said, upon which the whale replied :—

“For twice twelve years have I been lying here and have seen no other human being besides yourself; and as you have been the instrument of my delivery I will give the box containing the precious gems to you, take it and be happy.”

Thus saying the whale threw up a box, which the boy took up, thanking the whale; and behold! the waves of the sea came up foaming furiously, and rising higher and higher encircled the whale and drew him again into his mother, the ocean.

Taking the box the boy came to the city the king of which was building the tank, and delivered the message of Ísvara to the king. The king, whose greatest ambition was the welfare of his subjects, willingly risked half his kingdom. It also happened that this boy was the only foreigner who had ever passed through the dominions of this king, and consequently he was selected as the fortunate recipient of half the kingdom and the king's daughter in marriage. The gift and the marriage were therefore offered to the boy, who readily and with great pleasure gave his assent; and this brought about the completion of the tank.

In due time the wedding was celebrated with great pomp, and our hero, as a prince and the son-in-law of a great Rājā, proceeded on his journey homewards, accompanied by a retinue of many soldiers, horses, elephants and camels,

laden with costly articles. In this way he soon came upon the mango-tree and delivered the message of Ísvara to the effect that a great treasure was lying buried at its foot, and that the tree should allow the first passer-by to unearth it and take it away, when its fruit would be eaten to the very last.

On hearing this the tree said to the boy :—“I have been standing here for twice twelve years and have seen no human being besides yourself; therefore the treasure is yours, take it and enjoy it.”

The boy got the treasure dug out, and no sooner had he taken possession of it, than all the retinue climbed up the tree, and ate each and every mango that was on it.

They soon left the place, and after a long time came to the jack-fruit tree, which was waiting impatiently to hear from the boy, whether he had met with Ísvara and what news he had brought concerning itself. The boy replied :—

“Ísvara has ordered me to tell you that in your trunk is hidden an immense quantity of gold which should be given to the first passer-by, and then only you will blossom and bear fruit.”

The jack-fruit tree, when it heard the command of Ísvara at once burst open its trunk from which fell out heaps upon heaps of gold, all of which was left at the disposal of the boy; and lo! the tree, the same moment, blossomed and bore fruit such as its kind never bore before, and in such quantity that it was nigh breaking with the weight.

Leaving this place, the boy, with all his retinue and the treasures he had got from the trees, took the road to his native place, where his mother was still living in a wretched hut. He therefore went in advance, hired a splendid abode, and prepared his mother for the reception of his royal bride.

A little while after the retinue arrived. The boy and his mother came out to receive them, and conveyed the bride to their new residence. Being now well settled and having large resources of wealth at their disposal, the boy lived with his royal wife to a good old age, occasionally paying and receiving visits from his royal father-in-law. He also did many charitable deeds and was loved and respected by all around him.

EK GARIB SOKRA ZO GELA ISVARACHE SUDILA.

Èk hôthi dôkrî ani tiehâ sôkrâ giâchâ dhandâ hôthâ lôkhâchîm dhôram chârâvâ nevâchî. Thiâcham pagâr hôtham murâd thauram, ani bizâ kainâ upai nôthâ. Môthâ dâbalehâr, aureshûc guê murâd vakhât êkê gevnîsim khusî hôth. Murâd thêp aissam sâllam âni sevtîs thô sôkrâ bâzîrlâ ani vichâr kêlâ guê zâvâh Îsvârâchê sûdilâ âni vichârâvam guê sârê dâniâmani thiâlâ êkhlîlâ kâm thêvilam garîb.

Aissâ vichâr karûnsîm thiâzûn âislâ sângathlam rôtiâ bhûzâvâ sangâthi nevâlâ. Dôkrîzûn bâzrichiâ rôthiâ bhûjilâ ani diliâ sangâthi.

Thiâ sôkriâzûn thiâ rôtiâ ani êk kurâd gevûnsîm gôlâ Îsvârâche sûdilâ. Châl Châl gôlâ murâd lâmb. Thavam râth zhaili bhârim. Baislâ êkê phausî buram, thauri rôti khâlî ani niûzlâ. Sakâlchâ ûthûnsîm zâum lâglâ, thavam thiâ phansâzûn pêkhvilam ani khabar kelam guê kainîm zîthês. Sôkriâzûn sângathlam guê Îsvârâche sûdilâ, thavam thô phaus bôthlâ:—

“Barâm, zar tûlâ Îsvâr bhetlâs thar aurâ mânzâ nirap dhês. Sing Îsvârîlâ guê bârâ ani bârâ chauvis varsam zhailim mânâm pûn mîvar êk phal âzûn ailam nâhin.”

Sôkrâ kabûl zhaili, sangâthi dôr hôthâ thiâvar êk gînth mîrli nâhin visrâvâ kartam, ani chaltâ zhailâ.

Bizâ êk dhis chîllâ. Râthehi bâzrichi rôti khâlî, ani êkê âmbiâ khûlim niûzlâ. Sakâlchâ zâthum thiâ âmbiâzûn khabar k'lam thiâ sôkriâpôr guê kainîm zîthês. Sôkriâzûn sângathlam guê zâtham Îsvârâche sûdilâ. Thavam âmbâ bôlûm lâglâ:—

“Zar tûlâ Îsvâr bhetlâs thar aurâ mânzâ nirap dhês, guê bârâ ani bârâ chauvis varsam zhailim mânâm pûn aurê thêpîn mînge phalîlâ kôni sîvluv nâhin.” “Barâm,” bôthlâ thô sôkrâ, ani dhûsri gînth mîrli dôrûlî, ani chîltâ zhaili. Zîtham zîtham pônchlâ êkê gînvîlî. Taiâ gînvâchî rizâ khanith hôthâ êk thalam thiâchê raitchê kurtam, pûn thêm thalam kainî pûram hôth nôthum. Êkê thavâr bân lûnsîm bige thavâr bân lûm lâglîm kâ pailî bâzû khôsalthî, ani thi bâzû dhûrûs kartham dhûsri bâzû khôsalthî. Aissam kartham bârâ ani bârâ chauvis varsam zhailim. Râjâlâ khanthi dôkhânsîm thiâ sôkriâzûn thiâlâ vichârilam guê aissam kam. Râjâzûn sângathlam, ani manghîm thiâzûn sôkriâpôr khabar kelam kainîm zâth hôthâ thê. Thiâzûn bôthlâ: “Zâtham Îsvârâchê sûdilâ.” Thavam Râjâzûn bôthlâ:—

“Aurâ mânzâ nirap sângh Îsvârîlâ. Bârâ ani bârâ chauvis varsam zhailim guê mîm thalam bindhitham thê mangê râithchê kartham, pûn êkê thavâr bândhûnsîm bige thavâr bândhûm lâglîm kâ pailî bâzû khôsalthî, ani thi dhûrûs kartham bigi bâzû khôsalthî, ani thêm thalam kainî pûram hôth nâhin. Khabar kar Îsvârâparaissam kam, ani mînzân kâ karâvam.” Thô sôkrâ kabûl zhaili, thîsri gânth mîrli dôrûlâ ani chalthâ zhailâ.

Chanthâ dhis chîllâ ani pônchlâ êkê bandhrâlâ. Thaim êtham râth zhaili, rôti rôthi thi khâlî ani niûzlâ. Sakâlchâ ûthlâ thê êk môthâ manghalmâsâ nadhîrên parlâ sûkhê zaminivar. Thô gu'îlâ mîrî, thavam thiâ manghalmâsiâzûn thiâpar khabar k'lam kainîm zâth hôthâ thê. Sôkriâzûn sângathlam guê Îsvârâchê sûdilâ. Thavam thô manghalmâsâ bôthlâ:—

“Zhar tûlâ Îsvâr bhetlâ thar mânzâ nirap dhês, guê bârâ ani bârâ chauvis varsam zhailim mânâm sûkhê zaminivar parlaum thê, pûn aurê t'pân êk thari phêus ailî nâhin mânâm dhariâmani zhâvâlâ.”

Sôkrâ kabûl zhailâ, chauthi gânth mîrli ani dhariâmani dhauv mîrli. Thavam baghâ kâ zhailam, êk rasthâ zhailâ, ani sôkrâ sûkhê paim chûlûm lîghlî. Murâd lâmb chîlliavar êk ghar ailam, thiâ gharâchê savê pairivar bûsithî Îsvâr, pûn thiâ sôkriâzûn ôlkhilam nâhin.

Îsvârâzûn khabar kêlam thiâpar: “Thûm kôn hais ani kâ paigê tûlâ?” Thavam sôkriâzûn zavâb kêlâ: “Mîm ailam Îsvârâchê sûdilâ. Sing mîlî tûlâ khabar aisêl thê, Îsvâr kainîm mîlî thê.” Îsvârâzûn bôthlâ: “Thûlâ kâ paigê Îsvârâchê mêrê mâlî sângh ani mîm tûlâ âdhîr dhên.”

Thavam thiâ sôkriâzûn sângathlam thô kôn hôthâ thê ani kaissâ ailâ Îsvârâchê sûdilâ. Îsvârâzûn sângathlam thiâlâ gharâ zâvâlâ ani bôthlâ guê thiâ dhissâsim thô hoil khâun piûn hûnsâr.

Auram aikûnsîm thô sôkrâ deulâ chauthê pairivar. Îsvârâzûn hôthîrilam ani khabar k'lam bizum kainî sângvâcham aisêl thê. Thiâ vaktham thûlî viêth parlî manghalmâsiâchî ani sângathlam Îsvârîlâ guê êk manghalmâsâ parlî sûkhê zaminivar, ani bârâ ani bârâ chauvis varsam zhailim thiâlâ pûn aurê t'pân êk bi phêus nîhin ailî thiâlâ dhariâmani nevâ sârki.

Îsvâr bôthlâ: “Sângh thiâ manghalmâsiâlâ

gu' thiachê pôtâmani hai êk pètti hiriam mô-thiâchi. Zar thi pètti thô vòkil âni pailê vâtsarialâ dhêl thar êk phêns ail âni thialâ nail dhariâmani."

Auram aikûnsim thô sôkrâ deulâ thisrê pairivar, thavam Îsvarâzûn dhûsrûn pêkhvilam âni khabar kêlam: "Bizam kain sangâvâcham hai?" Thavam sôkrialâ viâdh parli rājâchi âni thô bôthlâ: "Êkê gânvâmani êk rāzâ hai, thiâzûn êk thalam bândath ghâthlam, pûn bārâ âni bārâ chauvis varsam zhailim thari thêl thalam kain puram hoi nâhin. Êkê bāzû bândhûnsim bige bāzû bândhû lāghtham kâ paili bāzû khôsalthê âni thi dhûrûs kartham bigi bāzû khôsalthê. Thiâthô thiâzûm sangathlam vichârâvâ gu' thiâzûn kâ karâvam."

Îsvarâzûn bôthlam: "Sangh thiâ rājâlâ guê thiachê manâmani aisel thiachê raithêcham barêpan thar thiâzûn âplâns ardham rāz âni sôkrî dhiavi pailê vâtsarialâ, thavam thêl thalam puram hoil."

Thavam thô sôkrâ ūtharlâ dhûsrê pairivar âni Îsvarâzûn thisrûn khabar kêlam: "Bizam kain sanghâvâcham hai?" Thavam thiâlâ viâdh ail âmbiachî âni thô bôthlâ:

"Êkê rânîmani hai êk âmbâ. Thô sangthai guê bārâ âni bārâ chauvis varsam zailim thiâlâ thiam âpazlai thê, pûn aurê varsân bilkul kôni thiacham phal khai nâhin."

Îsvarâzûn sangathlam thiâ âmbialâ sangâvâ gu' thiachê bûndhâsim hai êk pètti môthê dhanâchi. Zar thi pètti dhêl pailê vâtsarialâ thê mânsam thiacham phalan phal khâthin.

Êm aikûnsim deulâ pailê pairivar, pûn Îsvarâzûn thiâlâ hôdhârilam âni magâri vichârilam kain sangâvâcham aisel thê. Thiâlâ phansâchi viâdh parli âni thô bôthlâ: "Mûrâdh lāmb ânsim êk phanis hai. Thô bôthlê gu' thiâlâ bārâ âni bārâ chauvis varsam zhailim pûn adhiap thiavar phal ailam nâhin."

Îsvar bôthlâ: "Sang thiâ phansâlâ gu' thiachê bhûndâmani hai murâd dhan. Zar th m dhan dhêl pailê vâtsarialâ thar thô phalânsim bhavêl."

Auram aikûnsim thô deulâ âni châlthâ zhailâ. Îsvarâzûn pêkhvilam âni hêdhun hêdhun khabar kêlam bizam kain sanghâvâcham aisel thê. Thiâzûn bôthlam nâhin âni châlthâ zhailâ.

Dhariâ passâr kêliavar rasthâ bandh zhailâ, âni manghalmâsâ bh' tlâ, âni thiâlâ gêm Îsvarâ-

zûn bôthlatham thêl sangathlam. Thavam thô manghalmâsâ bôthlâ: "Bārâ âni bārâ chauvis varsam zhailim mîm parlam thê pûn tûgê sîvai bizam kônim êi zai nâhin, thar thûns gê thi pètti âni khûsâl hô." Aissam bôlûnsim thi pètti vòkilâ âni thiâs vakthân zâr ailâ âni thiâ manghalmâsialâ dharian nêlam.

Thi pètti gêûnsim thô sôkrâ gêlâ thiâ gânvâlâ zaiam kâ rāza thalam bândhith hôthâ âni Îsvarâcha nirap sangathlâ thiâ rājâlâ. Thô rāzâ, giacham dhian mian hôtham thiachê raithêchê barêpanavar kabûl zhailâ ardham rāz âni thiâchi sôkrî dēvâlâ êkê vâtsarialâ.

Atham aissam zhailam guê hia sôkrîa sîvai bizâ mânûs kôni thiâ gânvânsim passâr zhailâ nôthâ, thiâthô rājâzûn thialâs thiacham ardham rāz âni sôkrî dhili. Thaurê dhissân varâd zhailam. Thavam thiâ thaliacham bândkam sampûrlam. Atham thô sôkrâ êkê rājâchê zivaim parman g' lā gharâ, thiachê sangathi paltani, ghôrê, bathi âni hûttam, âni murâd dhan âni māl. Zâtham zâtham ailâ thiâ âmbiachê m rê, âni thiâlâ Îsvarâchâ nirap dhilâ.

Thavam thô âmbi bôthlâ: "Bārâ âni bārâ chauvis varsam zhailim mânâm pûn aurê varsân tûgê khiris bizam kôni avârsim êi zai nâhin, thar thûns kûrau âni thêl dhan n'."

Thiâ sôkrîazûm hukum keli thêl dhan kurvûn kârâvâ, âni kûrvithûs sârim mânsam charlim âni phalan phal khâlâm.

Ânsim g' lā âni zâtham zâtham bhêtlâ phansâlâ âni thiâlâ sangathlam: "Îsvarâzûn sangathlam guê tûgê bûndhâmani hai murâd dhan. Zar thêl dhan dh' sil pailê vâtsarialê thê thûvar phûlam âni phalam êthin."

Auram thiâ phansâzûn aikûnsim thiacham bûndh ugrilam, âni rāsîsim sônâ parlam âni thêl dhilam thiâ sôkrialâ, âni thiâs vakthân thiavar phûlam âni phalam ailim aurethûk guê thiachê bhârâsim thô phanis môrthôthâ.

Ânsim niûgâlâ âni thiachê gharchâ rasthâ dhêlâ. Thô gêlâ puram thiachê aislâ khabar dh' vâlâ. Thi adhiap r' thasê êkê zhômpriâmani. Thô gêlâ âni êk môtham ghar gethlam bhâriâsim. Thaurê vakthâsim thiâchi paltan biltan pôchlim. Thô sôkrâ âni thiâchi âis niûgâlim bh' tâvâ âni rājâchê sôkrilâ nêlam thiachê navê gharan.

Atham thiachê m' rê murâd dhanmâl zhailam âni thô sôkrâ rêlâ thiachê baikôsîm khûsâlin. Thiâzûn thari murâd dharam kêlâ âni sârim mânsam thiâlâ baram châlîm.

A NOTICE OF THE ZAFARNAMA-I-RANJIT SINGH OF KANHAYYA LAL.

BY E. REHATSEK.

(Continued from p. 312.)

26. His desire of subjugating **Kashmir** having again become dominant, the Mahārāja determined to attack Muhammad Āzim, the Afghān governor of it, and went against him in St. 1871 [A.D. 1814] with numerous Rājas of the mountains, accompanied by their forces. He remained for some time at Siālkôt, till he was joined by his allies, and then marched into the mountains where also 'Az Khān, the chief of **Rajauri** came to meet him, paid him homage, and tribute. Then Ranjīt Singh went on to Dēra Bahrām,¹⁹ where he encountered a force of the enemy but routed it, whereon it took refuge in the fort, which was besieged and surrendered. Then he continued his progress to **Pūnchh**, where he halted several days and sent an envoy to Muhammad 'Azim, requiring him to submit, and the latter replied that he was not subject to the Mahārāja, but to the Shāh of Kābul, who had entrusted him with the government of Kashmir, which he was prepared to defend. Ranjīt Singh now determined immediately to attack him, and crossing the Pir Panjāl Range marched to **Hirāpūr**, where he found numerous Afghān and Kashmiri forces collected, and gave them battle. During the fight, so violent a fall of rain took place that it caused an inundation, and, the cold being very intense, disheartened the Pañjābīs so much, that they were defeated; three of their high officers being killed, namely, Gurū Singh, Mahēshā Singh, and Dasā Singh. Whilst the battle was yet raging, the treacherous 'Az Khān, who had joined the forces of Ranjīt Singh only on compulsion, informed him that most of the troops left by him at Hirāpūr had been slain or captured. This news was false, but was believed by the Sikhs to be true, and Ranjīt forthwith retreated in great haste to Bhimbar on the frontier of Kashmir, but on ascertaining that 'Az Khān had made a mendacious statement, he desired immediately to return and subdue Muhammad Āzim. The *sardārs* of his Court, however, made strong representations to the contrary, boldly giving

him the advice to retreat with his forces to Lāhōr, which he was ultimately compelled to adopt. They also suggested that in Lāhōr preparations might be made for renewing the campaign if necessary, but that meanwhile the Mahārāja ought to send to the Afghān governor of Kashmir a conciliatory letter, mixed notwithstanding with threats, counselling him to abandon the siege of Hirāpūr, and to allow the Sikh garrison to depart. This Ranjīt Singh did, and was in a short time joined by the garrison of Hirāpūr, which had capitulated, and brought a friendly reply from Muhammad 'Azim. The march back to Lāhōr now began immediately, but the **Diwān Mohkam Chand**, who had already fallen sick in Kashmir, expired on arriving in the capital of the Pañjāb. His loss was much deplored by Ranjīt Singh, who appointed his two sons **Ramdial** and **Mōtirām** to succeed him as Diwāns, and put them in charge of various military expeditions. Disturbances were now raised by the **Khatak** tribe of Afghāns and by other malcontents in the districts round **Makhad**²⁰ and they besieged the small Sikh garrison left in the fort of that name. This information having reached Atāk, troops marched forthwith from that place to relieve the garrison, but were totally defeated by the Afghāns, whereon Ranjīt Singh came in person with his forces, dispersed the rebellious *zamīndārs* to the four winds, relieved the distressed garrison of Makhad, and conquered the district again. A portion of the vanquished rebels having been slain and the remnant made prisoners, the troops departed.

27. Having for a long time entertained the design of subjugating the Nawāb of **Multān**, and becoming master of the whole Pañjāb, Ranjīt Singh despatched an army under the command of **Diwān Bhawānidās** to Multān, who, on his arrival, pitched his camp near the city, but found the gates of it locked. The Nawāb, by name **Muzaffar Khān**, had paid his tribute and *nazarāna* regularly during several years, but had at last fallen into poverty, and

¹⁹ i.e. Bahrāngalā, near the Pir Panjāl Pass.

²⁰ Makhad is a fort 50 miles S. of Peshāwar on the left bank of the Indus.

now possessed only an exhausted treasury; so he determined to resist further demands with an armed force, which he had collected from the surrounding Muslim population, calling upon it to fight for its religion. After waiting for some time, the *Diwân* at last opened fire on the fort, which was however most energetically returned from the ramparts, and a desultory warfare ensued, in consequence of which the *Diwân Bhawânichand*²¹ asked for reinforcements, which were granted, and consisted of an army of ten thousand men. When these troops, who had made forced marches, arrived, siege batteries were immediately erected, and a breach in the fort-wall was made, giving admittance to a storming party; whereon the Nawâb, who now perceived the great danger of his position, promised to give to Bhawânidâs all the money at his disposal, or in more plain language, offered him a very large bribe, which the *Diwân* accepted. He immediately ceased his hostilities and indited a mendacious letter to Ranjît Singh, informing him that the Nawâb was too powerful to be subdued at present and that, such being the case, the Sikh forces were only being wasted, but that in a future campaign with fresh troops they would certainly be successful. After despatching this letter, Bhawânidâs returned to Lâhôr. The Mahârâjâ, disgusted with the results of this campaign, reproached Bhawânidâs with being a traitor, bribed by the enemy after he had almost obtained possession of the fort; accordingly he put him in chains and, casting him into prison, confiscated all his property, but nevertheless again liberated him after the lapse of a few months.

The desire of conquering **Multân** having again become uppermost in his mind, Ranjît Singh made great preparations for a new campaign and appointed his own son, Prince Kharak Singh to command it, with instructions to deprive the Nawâb of the district and all the wealth he possessed. The Mahârâjâ also ordered the *Diwan Dêvichand* to collect a number of siege guns and to second all the efforts of the prince to the best of his ability. The gates of the fort having been found closed when the army arrived, the siege began as soon as the guns could be put in

position, and firing continued till breaches could be opened, and then scaling ladders were applied in various places, and the first man to climb over the rampart was **Sadhû Singh**, who was followed by thousands of others. When the Nawâb beheld the Sikhs thus rushing into the fort, he resolved to die sword in hand; and courting martyrdom in green habiliments, sallied forth with his Muslims, who were slain in the contest as well as three of his sons, and when the fourth was captured, the Nawâb became more furious than ever and fought till he was cut down. When all resistance had ceased, the Sikhs plundered every street, *bâzâr* and house, getting so excited and indulging so long in this occupation, that the *Diwân*, whose orders to cease plundering were disobeyed, succeeded only after many efforts in quelling the tumult. He collected on behalf of his government all the wealth of the Nawâb and despatched it to Lâhôr, where the Mahârâjâ ordered the whole population to make preparations for rejoicing, as soon as a courier with the news of the victory arrived. When the booty, which consisted of gold, silver, precious stones, shawls, silk cloth, and every kind of valuable article arrived, Ranjît Singh was engaged in banqueting, and on meeting the *Diwân*, bestowed on him a rich dress of honour, not forgetting however his own son Kharak Singh, whose position he likewise exalted. He even tried to console **Sarfarâz Khân**, the captured son of the late Nawâb, by presenting him with the *qasba* of Sharaqpur as a *jâgîr*, and when the unfortunate youth recounted to the Mahârâjâ the fearful atrocities committed by the Sikhs whilst plundering the town, the *Diwân* excused himself by stating that he had, on the said occasion, lost all control over the troops, who refused to obey him. But Ranjît Singh ordered, on pain of his sore displeasure, every soldier to disgorge the booty he had brought from Multân, which having been done, he removed the bulk of it to his own treasury, and distributed the rest among the poor.

28. Information having arrived from **Kabul** that **Fath Khân**, the *wazîr* of **Mahmûd Shâh**, had fallen into disgrace and been deprived of sight by the **Shâhzâda Kâmrân**.

²¹ Called Bhawânidâs a few lines previously.

Governor of Hirāt,²² and that a civil war was raging in Afghānistān, the Mahārājā considered this a good opportunity for conquering both Pêshāwar and Kashmîr, the more so as the latter province was now governed by **Jabbār Khān**, whom Muḥammad 'Āẓim had left as his *nāib*, or lieutenant, when he retreated to Afghānistān. Ranjît Singh accordingly marched in the direction of Pêshāwar, and in a short time crossed the Rāvî, the Chināb, and the Jhêlam, but when he reached the banks of the Indus, he found no boats, and crossing it without any, in an almost miraculous manner, on horseback, with his army, safely reached the opposite bank, conquered the fort of Khairābād and then the fort of Jahāngîr, whereon **Firûz Khān**, the chief of the **Khatak** tribe of Afghāns humbly came to pay him homage. When **Yār Muḥammad**, the governor of Pêshāwar heard of the approach of Ranjît Singh, he forthwith retired to the Yûsufzâi mountains, and the Mahārājā took possession of the fort, appointed **Jahāndār Khān** commandant of it, and departed again after a sojourn of only three days. Whilst encamped near Aṭak, Ranjît Singh received the offer of a *nazarāna* of a *lākh* of rupees from Yār Muḥammad, who also promised annually to pay a similar sum on condition of being reinstalled governor of Pêshāwar, and the Mahārājā consented. Meanwhile news arrived that Yār Muḥammad had by the aid of **Dôst Muḥammad** nevertheless attacked Jahāndār Khān, and expelled him from Pêshāwar, of which they took possession. The Mahārājā at once despatched his son, **Kharak Singh**, with ten thousand men to reduce the two invaders, but the blow aimed at them was avoided by the arrival of the promised and long delayed *nazarāna*, and a profession of allegiance on the part of Yār Muḥammad. Having terminated this affair to his satisfaction, the Mahārājā returned with the money he had obtained to Lāhôr, but as his heart was bent on the conquest of **Kashmîr** he could not rest long.

The army having been got ready in St. 1876 [A. D. 1819] it happened at the same time that

Jabbār Khān, who was at that time Governor of Kashmîr, had not only dismissed but also disgraced and reduced to penury his *Diwân*, **Pāṇḍit Birbar** by name, on which the latter hastened to Lāhôr, breathing vengeance, and urged Ranjît Singh to subjugate Kashmîr. The Mahārājā consented to the proposal but apprehended that he would be disappointed in the enterprise, as on a former occasion, unless he could obtain the certainty of being supported by all the chiefs of the country. Accordingly the said *Diwân* sent letters to the Rājās, inviting them to make professions of loyalty to Ranjît Singh, and in a short time received satisfactory replies from many; and even '**Āz Khān of Bhimbar**, who had been an adversary, now promised to support Ranjît Singh, as well as the chief of **Rājauri** and the commandant of **Pūnchh**:—wherefore the army at once began its march. **Devichand** received orders to hasten to the town of Rājauri and there to await the arrival of the Mahārājā; and Prince **Kharak Singh** was instructed to march with his portion of the army to **Jammu**, and to await the arrival of the Mahārājā at the foot of the Himālayas, but meanwhile to carry on intercourse with the mountain chiefs, and to make sure of their allegiance. Ranjît Singh went from Lāhôr first to Amṛitsar, where he performed his devotions in the temple of Rāmdās, distributed abundant alms among the holy men of that locality, and then quickly marched to Kashmîr, where he met with a friendly reception, because he was accompanied by the fugitive *Diwân*. He nevertheless thought it convenient not to advance further after reaching Bhimbar. Having for some time remained in that pleasant town and concentrated his forces, he ordered Prince **Kharak Singh**, with **Devichand** for his lieutenant, to advance, and they marched with friendly chieftains till they reached the **Pir Panjāl Range** of the Himālayas, where they encountered the enemy, and an action of several days' duration ensued in which the Sikhs were victorious. Having thus defeated the united Afghān and Kashmîr forces they continued their journey with the

²² According to the *Tārīkh Sulṭān* p. 111 the Shih-zāda Kāmran told his father Mahmūd Shāh, who was at that time sovereign of Afghānistān, whilst encamped near Hirāt, that whilst their *wazir* remained in power, they could be rulers of the country in name only; and when the next day the *wazir* **Fath Khān** paid them a

visit, he pretended that the latter had taken the Shih-zāda Mālik Qāsim, son of Hājī Firūzudīn, and had entered their harem. So the king put out the *wazir's* eyes as a punishment. In the *Zafarnama* the name of the sovereign of Afghānistān is erroneously lithographed **Muhammad** instead of **Mahmūd**.

intention of conquering **Srinagar** likewise. **Samad Khân** and **Mihardil Khân**, the two principal Afghan officers of **Jabbâr Khân**, the Governor of Kashmir, anxious to impede the further progress of the Sikhs, attacked them, but were again routed, and **Mihardil** was slain. **Jabbâr Khân** now took refuge in the fort of **Shêrgadh**, whereon **Ranjit Singh**, meeting with no further opposition, at once entered the city of **Srinagar**, accompanied by all the chiefs of the surrounding localities, who paid him homage. After having regulated the administration the **Mahârâjâ** intended to attack **Jabbâr Khân**, who had shut himself up in the fort of **Shêrgadh**, and found that he had evacuated it, but left all his wealth behind, which pleased **Ranjit Singh** greatly. Having thus conquered Kashmir, the **Mahârâjâ** appointed the **Diwân Dêvichand** to be Governor of it, spent a couple of weeks at **Rājauri**, then took the fort of **Âzingadh** with its Kashmiri garrison by a single assault and marched back to **Amritsar**, where he made large presents to the temple of **Râmdâs**, and distributed alms. Lastly the **Mahârâjâ** returned to **Lâhôr**, where he bestowed robes of honour and other rewards upon his officers and troops, ordered general rejoicings to celebrate the victory, and dispensed hospitalities in royal fashion.

29. After the termination of the festivities the **Mahârâjâ** sent orders to **Dêvichand** to march with all his forces to **Mânkêrâ**²³ to realise by force the tribute which the **Nawâb** of that district had failed to pay. The orders were however countermanded by **Ranjit Singh** on being informed that the **Nawâb** had made very extensive preparations for resistance, and he marched in person to see what could be done. He crossed the **Râvî**, and on arriving in the district of the **Nawâb** the army plundered it right and left,—the **Sardâr Hari Singh** distinguishing himself especially in his raids upon **Mathâ** and **Tiwânâ**. Then **Ranjit Singh** went to **Bhakar**²⁴ but found that the garrison of the fort had evacuated it. He then sent **Dal Singh** to reduce the **Dêrâjât** and successfully captured several chiefs, but one **Nânak** by name, who governed **Dêra Isma'îl Khân** on behalf of the **Nawâb**, closed the gates of the fort, gave

battle to the army, and being routed, abandoned to it all his wealth. Then **Ranjit Singh** again marched back to **Mânkêrâ**, but the **Nawâb** bolted its gates, and the **Mahârâjâ** was under the necessity of laying siege to it for some time, although it surrendered at last.

The **Mahârâjâ** received kindly the repentant **Nawâb** in audience, and bestowed upon him the town of **Dêra Isma'îl Khân** with the district for a *jâgr*. **Hari Singh** then entered the fort and laid all the wealth of it at the feet of **Ranjit Singh**, whereon he was rewarded with a gift of landed estates, and other officers received money. The **Mahârâjâ** then crossed the **Biyâs**, marched to **Amritsar** where he held a *darbâr*, and distributed largesse. He next again went to **Multân**, on approaching which, his boats were met at a distance of a couple of miles by a deputation of welcome on the part of the city, which he forthwith entered, and received numerous chiefs, who desired to pay him homage. The **Hôli** festival having just begun, he celebrated it with much pomp, gave a royal banquet, and liberally distributed gifts. After the termination of the festivities the **Sardârs Haridâs** and **Buddhâ Singh** were despatched in the company of the prince **Khafak Singh**, with sufficient forces to **Bahawalpûr** to compel the **Nawâb** to pay tribute, which he had failed to send for several years. First the Sikhs conquered the fort of **Kôt Shujâ'a**, expelling its garrison, and then plundered the district in every direction, although the **Mahârâjâ** had not given them permission, and in doing so they allowed themselves such terrible license that the **Nawâb** immediately sent all the money demanded to **Ranjit Singh**, who thereon praised him, sent out a robe of honour, and at once recalled his troops.

Information having arrived that throughout the whole **Hazâra** country in the neighbourhood of Mount **Darband** and **Tarbila**, the Muslim population had rebelled against the Sikh government, and that the inhabitants were ready to sacrifice their lives for their religion, **Ranjit Singh** ordered **Fath Singh** the chief of **Kapurthalâ** with his troops, and **Ilâhi Bakhsh**, the commandant of artillery

²³ The town of **Mânkêrâ** is situated about midway between the **Indus** and the confluence of the **Chinâb** with the **Jhelam**.

²⁴ **Bhakar** is on maps spelt **Bakkar**, and situated seven miles from the **Indus**, or about 30 miles N. W. from **Mânkêrâ**.

with his guns, in the company of the prince **Shêr Singh**, to march to the rebellious district, whilst the **Dêwân Râmdial** was to proceed in the same direction with the forces of the government. When the Sikhs arrived in the Hazâra country they met with great opposition, but as soon as their artillery begun to play upon the enemy they gave way and disappeared, whereon the Sikhs unmercifully plundered the district. As soon as the high officials had begun to regulate the administration, **Sadâ Kañwar**, the mother of **Shêr Singh**, also arrived with her forces, and, being a lady of great resources and much tact (for she was respected as if she had been a man), proposed that the people of **Rahtiâ**, a tribe on Mount Darband, should be attacked, and hostilities renewed for the purpose of subduing them, because in her opinion they would otherwise again cause disturbances. Accordingly the Prince **Shêr Singh** marched to annihilate them with sword and gun, but they resisted most valiantly, and being very numerous, surrounded the Sikhs, who were relieved only after the **Dîwân Râmdial** had come to their rescue, and after putting the rebels to flight pursued them to their stronghold of **Rahtiâ**. But whilst on the march, some of the brigands rushed from an ambush to attack him, and although the **Dîwân** fought bravely, prostrating a number of his assailants, they slew him at last. When the Prince **Shêr Singh** was informed of what had befallen the **Dîwân**, he swore to avenge him by exterminating every one of the rebels, and in doing so he burnt all their habitations likewise. When this information reached the **Mahârâjâ** he was so pleased with the exploit of his son, that he wrote to **Sadâ Kañwâr** to be proud of her boy, and to surrender to **Shêr Singh** all her estates, appointing him her successor. The lady, incensed at the proposal, sent back a message to the effect that she was amazed at **Ranjît Singh's** greed after wealth, as she had given him everything she was possessed of: that when she took **Lâhôr** with an army from a foe, she had surrendered it to him, protected him, raised him to the throne, and even made him her husband; and that having now become decrepit and old, she was by no means willing to part with her wealth and means of subsistence. When these words were repeated to the

Mahârâjâ he was much vexed, but his relations with the lady being of so delicate a nature, he said nothing of any intention to punish her. Meanwhile several months elapsed. The **Râni Sadâ Kañwar** threw to the winds her loyalty and assumed a hostile attitude, besides placing herself under the protection of the English by surrendering to them her ancestral *qasba* **Badhâni**, where she herself intended to take up her residence after crossing the **Satluj**. At this news the **Mahârâjâ** immediately summoned the lady to his presence, and reproached her for being in her old age yet attached to the world, and for having injured the interests of her son, who was also his own, by offering her possessions to the English, and threatened to abase her to the dust if she refused to give a share of everything she possessed to **Shêr Singh**. At these words **Sadâ Kañwar** heaved a deep sigh, shed a flood of tears, and said never a word, but determined, in order to save her honour, secretly to depart to the English. She executed her design, but, being overtaken by troops sent in pursuit, she was captured, brought back, and put in chains. Moreover, forces were sent to her district to take possession of all her movable property, money and jewellery, to expel her officials from every locality, and to take forcible possession of her favourite residence, the fort of **Mukêri**. The forces reached the said fort, but were received with a shower of bullets, and, having no siege artillery at their disposal, were unable to take it, whereon the **Mahârâjâ** sent reinforcements and a sufficient number of guns in command of **Dêvichand**, whom the **Mahârâni Sadâ Kañwar** was compelled to accompany, and to order to devastate the country. At **Vatâlâ**, the first locality of note which this commander reached, he caused rivers of blood to flow, but afterwards endeavoured to console the inhabitants by establishing a regular administration. Then he made raids on all sides and devastated everything till he reached the **Biyâs**, which he crossed, and hastened to **Mukêri**, commencing forthwith to distress it by his artillery; but its defenders, faithful to the last, averred they would rather sacrifice their lives than surrender the fort without a written command to that effect from **Sadâ Kañwar**, whom alone they obeyed. Accordingly **Dêvichand** requested the lady to give the needful orders, but she

replied that war was a fair game in which no necessity whatever demanded interference on her part, and that if Dêvichand felt himself strong enough to conquer the fort he was welcome to do so. The Dîwân, being naturally displeased with such an evasive answer, determined to starve her, and, accordingly, withheld all supplies of food and drink. Having thus been reduced to the utmost misery, Sadâ Kaiwar at last indited the letter required to the commandant of the fort, and he thereon opened the gates and admitted the Sikhs, who at once began plundering remorselessly. Dêvichand sent a portion of the booty to Lâhôr, where the Mahârâjâ forthwith celebrated the victory by a royal banquet. When the troops returned, Ranjit Singh overwhelmed the Dîwân with favours, and invested him with a robe of honour, presenting to Shér Singh the district of Vatalâ. Sadâ Kaiwar, having been deprived of all she possessed was again thrown into prison, in which she expired a few months afterwards of a broken heart.

Information now arrived that Muḥammad 'Âzim had become *vazîr* in Kâbul, attained to great authority, and intended to reconquer Kashmîr, which had been wrested from him by the Sikhs. The Mahârâjâ accordingly made great preparations to resist the invasion by calling on all his vassals to aid him with their troops, and marched in person, crossing the Râvî, the Chinâb, and the Jhêlam, but encamping on the banks of the Indus which was much swollen. There being no boats at hand, a good swimmer was sent across the river to bring news about the enemy, and he returned with the information that great numbers of Afghâns had taken up a position on the Tehrî

Mountain, but that their commander-in-chief, Muḥammad 'Âzim, was still at Naushahra, and that they would march as soon as he joined them. The Mahârâjâ conceived that it would be best to surprise the enemy, and, immediately crossing the Indus in boats, ordered two of his French officers, the Generals Ventura and Allard, to march to Naushahra and attack Muḥammad 'Âzim, whilst Colonel Satgur Sahâi, the commander of the Akâlis, with the Sardar Mahân Singh, received orders to attack the mountain. The two last-named officers were at once met by the Afghâns, who killed the first of them together with 200 Sikhs, and wounded the second, whereon the rest began to retreat, but after being reinforced by the Najibs and the Bharmâris²⁵ they put the Afghâns to flight. The Afghan troops who fought in that action were 3,200, and the Sikhs 2,500 in number. On entering Peshâwar the Mahârâjâ was humbly received by Yâr Muḥammad, who had again supplanted Jahândâr Khân as governor of that locality, and Ranjit Singh now confirmed him in his post. On returning with the army, the Mahârâjâ celebrated his victory with public rejoicings and largesses to the population as well as to the temples and mosques. Then he went to Amṛitsar, where he held a *darbâr*, ordered the town to be illuminated, distributed alms, and made arrangements for building a masonry wall round the town, which was totally unprotected, expressing his desire that every one of the notables of the town should assist in this undertaking. He also rebuilt the temple of Râmdâs of stone, adorning it with gold and precious gems, enlarging and embellishing, at the same time, the famous sacred tank of Amṛitsar.²⁶ (To be continued.)

MISCELLANEA.

CALCULATIONS OF HINDU DATES.

No. 7

In the inscription of king Bhôjadêva of Kanauj at Dêôgaḍh, about sixty miles to the south-west of 'Jhansi' in Scindia's Dominions in Central India, published by Gen. Cunningham in the *Archæol. Surv. Ind.* Vol. X. p. 101 and Plate xxxiii. No. 2, the date (from an ink-impres-

sion; lines 6ff, 10) runs — Sainvat 919 Asva,śva-
yuja-śuklapaksha-chaturdîśayâm Vṛihaspati-
dinêna Uttar[â*]-Bhâdrapad[â*]-nakshattrê idam
stambham samâptam=iti
Śakakâl-âbda-sapta-śatâni chatur-aśity-adhikâni
784,—“the year 919: on the fourteenth *tithi* in
the bright fortnight of Asvayuja; on the day of
Vṛihaspati; under the Uttarâ-Bhâdrapadâ nak-

²⁵ According to a marginal note there were four *paltans* of each. Some Hindustâni Muslims among the Najibs. The Bharmâris had long mu-kets.

²⁶ The meaning of “water of life,” attributed to the word Amṛitsar in a marginal note by the author, is taken

from the Muslim myth of Alexander, who had gone in search of that famous beverage which conferred immortality upon him who could find and drink of it; but the interpretation of “nectar pool” would be more correct. [Amṛitsar is simply the “lake of amṛta.”—Ed.]

shatra, this pillar was finished; , seven centuries of years, increased by eighty-four, of the Śaka era; (or in figures) 784.”

This gives us, for calculation, Vikrama-Samvat 919 and Śaka-Samvat 784, both current, according to the literal meaning of the text; the month Āśvayuja (September-October); the day of Vṛihaspati or Jupiter, *i.e.* Thursday; and the Uttarā-Bhādrapadā nakshatra. The date, of course, is a northern date; but, as the given *tithi*—the fourteenth, is in a bright fortnight, this point is immaterial.

Taking the given Śaka year 784 as an expired year, Mr. Sh. B. Dikshit has obtained as the English equivalent, by both Prof. K. L. Chhatre's Tables and the *Sūrya-Siddhānta*, Thursday,¹ the 10th September, A. D. 862. The *tithi* ended 56 *ghaṭis* 37 *palas*, or 22 hours, 34 min. 36 sec., after sunrise on that day. By the equal-space system of the *nakshatras*,² the moon was in the Pūrvā-Bhādrapadā nakshatra up to 53 *ghaṭis*, 31 *palas*, or 21 hours, 24 min., 24 sec., after sunrise on the Thursday; and she then entered the Uttarā-Bhādrapadā nakshatra; *i.e.*, assuming sunrise at 6 a.m., only 2 hours, 35 min., 36 sec., before sunrise on the Friday. This, however, is a highly improbable hour for the completion, as stated in the record, of the pillar on which the inscription is engraved. But, by the unequal-space systems of the *nakshatras*, the Pūrvā-Bhādrapadā nakshatra ended at 23 *ghaṭis*, 40 *palas*, or 9 hours, 28 min., after sunrise on the Thursday; and the moon then entered the Uttarā-Bhādrapadā nakshatra; *i.e.* roughly about half-past three in the afternoon,³ leaving ample time, in ordinary working-hours, for the completion of the pillar before sunset.

This inscription, therefore, is of considerable interest, as indicating very plainly that one or other, if not both, of the more ancient unequal-space systems of the *nakshatras*,—one or other of which has to be applied in determining the *samvatsaras* of the Twelve-Year cycle of Jupiter mentioned in some of the Early Gupta records,—continued in use, in what had formed a part of the Gupta territory, down to at least the last half of the ninth century A.D.

Other points of interest in this inscription are (1) its giving, as the leading record of the date, a year of the era which, dating from the tribal constitution of the Mālavas, came afterwards to be called the Vikrama era, but is not called so in

this instance. (2) its giving, as an incidental detail, the corresponding year of the Śaka era and thus furnishing an early epigraphical instance of the equation of the two eras, and of a Śaka year quoted with full details for calculation. The Mālava or Vikrama year quoted, is, of course, the northern year. Apart from the locality of the inscription, this is shewn by the Śaka equivalent; for the month Āśvayuja of the southern Vikrama-Samvat 919 would fall in Śaka-Samvat 785 expired, not 784; and Thursday, the 10th September A.D. 862, if applied to the southern Vikrama year, represents Āśvayuja śukla 14 of the preceding year, Vikrama-Samvat 918. And (3) its quoting as current, according to the literal translation, a Śaka year which, for the actual computation of the details, has to be taken as an expired year.

J. F. FLEET.

PROGRESS OF EUROPEAN SCHOLARSHIP.

NO. IX.

Half a year of the Revue Critique d'histoire et de littérature.

(a) Nov. 22nd.—This contains a review of M. Sylvain Lévi's paper on the Brihatkathamañjari of Kshēmendra in the *Journal Asiatique*, which has already been noticed in these pages, *ante*, Vol. XVI. p. 111. The notice from the pen of M. V. Henry is very favourable.

(b) Dec. 6th.—There is an article by M. Sylvain Lévi himself on Dr. W. Solf's essay on the Kashmir recension of the Pañchāsikā. This also has been previously referred to by me, *ante*, Vol. XVI. p. 282. M. Lévi's opinion is “that so numerous are the points in dispute, that the labour of Dr. Solf has rendered a service to the cause of science. He directs attention to an interesting critical problem, and if he has not definitely solved the question, he has, at least, clearly defined the points in issue.”

(c) Jan. 3rd, 1887.—The second edition of the *Principien der Sprachgeschichte* (Principles of the History of Speech) by Professor Hermann Paul of Freiburg, one of the neo-grammatical school of philologists, is dealt with by M. V. Henry. According to the reviewer Professor Paul has been able to form a theory, and what is better, to abstain from following it to its ultimate consequences with rigorous inflexibility. He has written a book which is already, and which will, let us hope, become still more not only a breviary

¹ This result is also given by Gen. Cunningham, in *Archæol. Surv. Ind.* Vol. X. p. 102. But by his own and Mr. C. Patell's Tables and process, the *tithi* would fall on Saturday, the 12th September.

² See Table II. on page 3, *ante*.

³ The time, all through, is for Ujjain; as I have not the exact longitude of Dēogadh. Taking it, approximately, as 78° 15' E., the time, in each case, will be a little less than ten minutes later.

for philologists, but an indispensable auxiliary to the researches of other students.

(d) *Jan. 10th.*—Professor Rockhill's *Life of Buddha* forms the text of a short but favourable review by M. Feer. The same number contains an article by M. F. Geo. Möhl, dealing with the *Etymologisches Wörterbuch der slavischen Sprachen*, by the great Slavonic scholar, Professor Franz Miklosich, who is already well-known to the readers of the *Indian Antiquary* for his *Comparative Grammar of the Gipsy dialects*. The present *Etymological Dictionary of the Slav Tongues* is an epoch in the history of Slav philology; for, while it is a concise *résumé* of the progress hitherto accomplished in this direction, it at the same time opens out a vista of new researches, showing clearly what remains to be done, and marking down the points which are doubtful or obscure. As for the purely lexicographical portion of the work, it is developed in the most complete and thorough manner. The vocabularies of fifteen Slav Languages have been abstracted and arranged, and every word compared and analyzed in the most minute detail. Derivatives and compounds are arranged under roots, with a system and clearness which render easy the reading of the longest articles. Omissions are rare and of small importance.

(e) *Feb. 7th.*—Another member of the neo-grammatical school is dealt with in this number by M. V. Henry, in a review of Professor K. Brugmann's *Grundriss der vergleichenden Grammatik der Indogermanischen Sprachen*. This important *Comparative Grammar of the Indo-Germanic Languages* has attracted so much attention, and been so widely and favourably reviewed throughout the civilized world, that a very brief notice of M. Henry's verdict will suffice here. He concludes his article as follows:—"It will be seen that this work, which has already become a classic, marks a halting place in the Science of Language, of equal importance with the *Grammar of Bopp* and the *Compendium of Schleicher*. Its place is allotted in all philological libraries next these venerable monuments, to which we owe every respect, but which no longer fulfil our requirements."

The same number contains a contribution to the dispute between Dr. Zimmer on the one side and Dr. Whitley Stokes and others *contra*. Surely the *irritabile genus* of scholars seems to flourish more strongly amongst Celtic philologists than in any other branch of linguistic study. The contagion

of the National League and of boycotting has spread even to Old Irish MSS. In the present paper M. H. D'Arbois de Jubainville demolishes Dr. Zimmer's *Glossarium Hibernicarum e codicibus Wirziburgensi Carolisruhensibus aliis editarum supplementum*. Dr. Zimmer is roundly accused of plagiarizing from Dr. Stokes without acknowledgment.

(f) *April 25th.*—An important article by M. A. Barth in this number deserves a longer notice here than the above. It is a review of Dr. Gustave Le Bon's *Les Civilisations de l'Inde*.¹ Dr. Le Bon was despatched two or three years ago by the French Minister of Public Instruction on an archaeological mission to India, the formal result of which took the shape of a report in 5 volumes folio, with more than 400 plates and photographs. The present work is an abstract placed at the disposal of the general public, but an abstract free from dry-as-dust details, a recital animated, often brilliant, and frequently discussing general questions in a manner always interesting, though sometimes with doubtful justice.

In these days profusely and handsomely illustrated books about India are by no means rare. In France alone, it is sufficient to mention the travels of MM. Grandidier and Rousselet, published by Hachette, of which the artistic portion is irreproachable. But none of these books come near the perfection attained in Dr. Le Bon's volume, either in the number and systematic choice of the plates or in their admirable execution. It is to be regretted that these beautiful illustrations are not accompanied by a real text, and it is tantalizing, as one looks through them, to catch glimpses of the work which it would have been so easy for the author to write, if he had chosen to narrate and describe more,—a work charming, instructive and useful to all, to the specialist and to the general reader, and readily saleable withal, for every one would find therein something interesting. But, adds M. Barth, we are not dealing with the book which Dr. Le Bon could have and ought to have written, but with that which he has written. It is well described by its title. It is an attempt to realize the different civilizations which have succeeded each other in India from the earliest times to the present day. What could have induced him to attempt so great a voyage, furnished as he was, it must be confessed, with rather scanty baggage? Perhaps the lightness of the baggage is itself

¹ *Les Civilisations de l'Inde*, par le Dr. Gustave Le Bon, chargé par le Ministère de l'Instruction publique d'une mission archéologique dans l'Inde. Illustrated with 7 chromolithographs 2 maps and 350 engravings

and heliographs after photographs, water-colours, and papers of the author. Paris, Firmin Didot and Co., 1897, vii. 743 pp. 4to.

one of the reasons. But I see two others. One,—all to the honour of India and Dr. Le Bon, that India has evidently made a vivid and profound impression upon the author. In the presence of this infinite diversity of men and things, of this medley of institutions and beliefs, of customs separated amongst us by centuries, but which live there side by side, he has had, so to speak, a vision of the past. The genius of history has come to speak to him amongst the ruins, and he has felt himself endued with the mission of declaring a revelation. Here we touch on the second reason. It is that he believes many things to be newer than they really are. Indianists, he tells us, have written a great deal about all this, but, as they have not seen India, they have misunderstood much.² . . . But it is exactly because I value at least as highly as he does the merits of direct observation, that I regret the present work, and wish I could have found a few more personal reminiscences in the place of what he has been able to collect hastily from books on his return. At the same time material errors of omission and commission are comparatively rare, and one admires the good fortune, or to be more just, the tact and true historic feeling, with which he has been able to avoid snares, and to pass along the edges of quagmires without falling into them. He has not succeeded in avoiding being morassed a little with regard to the *Vêda*. He describes the Vêdic Aryans as knowing neither family nor race. No intermediary group of tribe, class, or government separated them. Neither rich nor poor, all equal. Religion itself was only the cult of race and family. Gods were confounded with ancestors, and the sacrifices to their ancestors, the funeral banquets, were the centre of this cult. All this picture is pure fantasy. He has also nearly gone astray in his dealings with the epic legends. At first he has followed Wheeler in fixing the conquest of Ceylon by Râma at fifteen hundred years before Christ, though he subsequently follows better authorities. He is wrong, too, in denying the existence of the feudal system in India;³ but his description of the clan, borrowed from the admirable *Studies* of Sir Alfred Lyall, is excellent. It would have been still better if he had not con-

founded the Râjpût clan with the Râjpût State, two things altogether different, even in Râjasthân. He has besides estimated below their value the importance and number of existing inscriptions,⁴ and he exaggerates the poverty of India in historical books; but he has had a clear and salutary idea of the deceitful *mirages* which are presented by the written tradition of the Hindus, and has not allowed himself to be seduced by the history drawn from it, which is still current in some publications.

Coming to the ethnographical portion of the work M. Barth remarks that the author has deeply studied the question of races. He has devoted a special work to it,⁵ and has also dealt with it in his *Civilisation des Arabes*.⁶ According to him **races correspond to species in natural history.** They classify themselves not by nationality, nor by religion, nor by tongue, nor even by anatomical characteristics. Their one criterion is an *ensemble* of attributes, intellectual and moral, confirmed by heredity,—a certain mental state constituting the race-genius, which is indelible. As regards India it must be observed that these conclusions do not tally well with the picture which he presents to us of the races of that country. They form an abstract theory without the counterproof of reality,—a sort of programme, but without the piece. He enumerates many races in India, but he shows us only one. When he talks of a mental state, it is only of the mental state of Hindus *in globo*; and he could not do otherwise, for these races are, before all, linguistic entities. Aryans, Drâvidians, Kolarians, Tibeto-Burmans, etc., differ continually both in their *traits*, and especially in their degrees of civilisation; but their classification is the work of linguists working on grammars and vocabularies, and generally caring little for the race-genius. Where the criterion of language fails, there remains sometimes a tradition, rarely true historic testimony, and where these fail there opens before us the plain of hypothesis pure and simple. To Dr. Le Bon, the Kûlis of Gujarât are Kolarians, and the Bbils Drâvidians. In reality, nothing is known about it, because these people no longer speak their own language. As for

² *Non calces hominum confingit adus Corinthum*, alis, Yes? But does Dr. Le Bon not know that at least four-fifths of those Indianists have not only visited India, but have lived there, many of them for more years than he has passed months in that country. There is, however, a foundation of truth in the reproach Sanskrit professors have now and then made for us a singular history of India and some chapters of that history have come, *de poche en poche*, and lodged themselves in the very volume of Dr. Le Bon. It is true, too, that many 'Old Indians' have been even less discriminating than he himself.

³ It developed in a different way from that in which

it did with us. The fief did not spring from the freehold, but it exists almost to the present day, and in its most characteristic forms, *e.g.* in regard to immunities.

⁴ He speaks of 'some inscriptions' for an epoch of which the number of those that are catalogued and are of historical value, alone amounts to thousands. In connection with this, I am bound to say that Dr. Le Bon has not been just to the efforts of the English Government and to the *Archæological Survey*. . . . That he has been able to date approximately the greater part of his monuments is due to the researches of that *Survey*.

⁵ *Hommes et les sociétés. L'Inde ancienne et leur histoire*, 1881, 2 vols. 8vo. ⁶ 1884, 1 vol. 4to.

Turanians our author divides them into Turani-Proto-Drâviḍians, Turani-Drâviḍians, Turanians come by the Turanian Gate (*i.e.* the Āsām Valley), and Turanians come by the Āryan Gate (*i.e.* the valley of Kābul). But positive ethnography has nothing to do with all this, for, so employed, the name is a mere word.⁷ One point, however, very clearly seen by Dr. Le Bon, and at which he appears to have arrived independently, although he has not been the first to establish it, deserves notice here. It is that the Āryans of India are only brothers of those of the West by language, and that they are deeply mixed with people of an altogether different descent. Whence came these? And who were they? Drâviḍians, Aborigines, or Malays? We shall perhaps never know, but surely they were not Turanians, as Dr. Le Bon would have us believe, and it is scarcely more probable that they should have come from the north-east by the Turanian gate, for they have the skin brown or black, the hair curly, the cheek-bones slightly elevated, and the eyes well apart and not placed obliquely.

M. Barth is astonished that the author, who praises Hindu art so highly, should not be more indulgent to its literature. Each is sister of the other. They have the same qualities and the same defects, the same minute finish in detail and workmanship, and the same weakness in the *ensemble*, for forming which they know hardly any method other than mere piling up. To M. Barth, the *Rāmāyana* is the exact counterpart of Kailāsa. India can dazzle us; it cannot, under any conditions contribute to our education. Whatever people may say, before the arrival of the Musalmāns, it had not the art of building. Its own architecture essentially fails in proportion, because it fails in age. It has remained infantine and cyclopiān, although, on the surface, the stone sometimes assumes the appearance of lace.

Dr. Le Bon's theories about Buddhism sharply differ from that found in many books. He shows that it was not a religion without divinities, and that it was not violently extirpated from India by the fanaticism of the priestly caste. He appears to have landed in India believing that Buddhism was an atheistic religion, absolutely distinct from other Hindu cults, and he must have been astonished to find its sanctuaries filled with

idols, and sometimes with the same idols as those in Brāhmanic temples. The first Buddhism known in Europe was exactly that gross and idolatrous religion which Dr. Le Bon has refound. Later on, when it was possible to study the system in its texts, and at the source, it was declared to be philosophically atheistic. It is possible that, owing to reaction against the ancient opinions, the latter were subsequently left a little too much in the shade, and, now, subsequently, by the same progress of inquiries, they are again rediscovered. It is perhaps the fault of scholars; but a scholar's opinion is always more or less polemic, and to value it aright, it is necessary to know the preceding opinion to which it forms a sequence. But, in affirming that Buddhism, considered as a philosophico-religious sect (and for long it was only that, and in no way a cult) was atheistic, scholars did not dream of denying that it had inherited the Brāhmanic pantheon, and that, further, it had fashioned out of it a pantheon, for its own use. The texts known as the Nēpālese, so far as they are published, belong to the class of these writings most penetrated with mythology, and yet they have been unhesitatingly accepted as valuable authorities for the Buddhism of India, and not as peculiar to that of Nēpāl. Those rock-hewn temples of Ellōra and Nēpāl, which taught so much to our author, have not been only lately recognised as Buddhistic,—nay, the very grounds of their recognition were the images they contained,—and it is not only to-day that we are in possession of a religious iconography of what is conveniently but not quite correctly called the Buddhism of the Mahāyāna. As regards the violent extermination of Buddhism, it has long been considered as legendary in works of authority, and there is now hardly any one except General Cunningham left to defend it. Can we explain this gradual disappearance of Buddhism, or as Dr. Le Bon puts it, its absorption into Brāhmanism, by supposing that the two religions approached each other gradually till they were confounded? M. Barth thinks not. The facts known to us point to nothing of the sort, not even in Nēpāl, and it is not thus that Hindu sects, provided with clergy, ordinarily are extinguished. They change

⁷ Turanians have been introduced into Indian ethnography under two claims. (1) As ancestors of the Dravidian nations, on account of certain alleged linguistic affinities between the Dravidian Languages and those spoken by the nomads of Central Asia. These affinities have yet to be proved. The few which appear to be well established, refer us to the North-West *i.e.* to the Brahmins of Afghanistan. Dravidians are almost black, while the Turanians are fair, or slightly yellow. It can, in fact, only be a question of linguistic parentage. (2) As the

residue of the hordes who have dominated for several centuries in the north-west of India, hordes without doubt greatly mixed, but of which the nucleus appears to have been formed by Tātār tribes. These invaders were certainly very numerous, and probably founded settlements in the country. Resemblances of proper names have caused search to be made for their survivors among several nations of the Pāṇjab and of Hindustān, especially amongst the Jats, but as yet we have nothing positive on the subject.

much in their essential attributes: but they die because they no longer gain recruits, and it is probable that such also was the end of Buddhism. If it has survived in Nêpâl, it is, says Dr. Le Bon, that that country is to-day in the same phase of evolution as that in which India was in the 10th century. M. Barth doubts this. Peculiar history must be explained by peculiar causes. What peculiar causes have been at work in Nêpâl he does not know, but he suggests one cause which may have exercised some influence, viz, that there are scarcely any true Brâhman in Nêpâl and it is permissible to suppose that it has been thus for long.

The work concludes with considerations on the India of to-day, and its future. Dr. Le Bon renders homage to the greatness of the work accomplished by England, but M. Barth considers this homage grudgingly given. The author draws back with one hand, with interest, what he has just given with the other. In fact, he is unjust. He admits the grand qualities of honesty, firmness, and dignity in the bulk of British officials, England, better advised than other nations, sending there her picked men, and yet he appears to attribute their ascendancy only to their haughtiness (*morgue*)! He dares to say that "till the Mutiny the Government of India was the exploitation pure and simple of 200 millions of men by a company of merchants, protected by bands of mercenaries," while he plainly avers that the substitution of the crown for the company was, in reality, only the official consecration of a state of things long since established in fact. He goes further. This régime of exploitation is still to continue; for among the five general rules which, according to him, direct the colonial policy of England, the 3rd is "that a colony should be considered as a property which it is necessary to exploit entirely for the profit of the mother-country." If he means by this to say simply that England does not deal in sentimental politics, that she does not act knowingly against her own interests, it is a truism. No nation would knowingly act so. If, on the contrary, he means that the conduct of England is coldly selfish and without compassion, M. Barth says that it is false, and he regrets, for the sake of Dr. Le Bon, that he has traversed India without perceiving it.

As regards the future, the author poses as a pessimist. According to him England is undermining her own work by the education which she gives to the natives. That work will perish by

the Bâbû. In endeavouring to inculcate our ideas into brains which are not made for them, she is producing mischievous beings to whom it will be necessary, sooner or later, to yield a portion, greater or less, of the power of Government. That will be the commencement of the ruin. That the Bâbû is too often an impertinent and insupportable being, and that the question of public education in India is peculiarly complicated, and even full of perils, no one can doubt. But all this passage, in which (according to M. Barth) one seems to hear the passionate polemics raised in the English and Anglo-Hindu press by the measures of Lord Ripon, is marked with an evident exaggeration. For the last 50 years, and more, the question of education has been under consideration in India; it has been faced on all sides, and many systems have been essayed. What would that of Dr. Le Bon be? Would he have England build a wall of China round her colony? Could she do so? If she could, should she, that she may conform to the anthropological laws, which are not perhaps sufficiently ascertained, given us by the author? The Bâbû is known in other places besides India. He can be found here, in Europe, if wanted; but every native who has received an English education is not like him. * * * The law of races does not perhaps prevent our knowledge being communicated to them, their being taught to apply it, and their being taught gradually the details of public business. Already, in India, there are municipal committees composed of natives, more free in their sphere than town councils in France, and it does not appear that they have turned out badly. Let us hope then, with many well-informed English, that the sons of the Bâbû will be worth more than their fathers, and that England will not have some day to defend her work against another very different enemy. At present she is not seriously threatened from without: but if, as a consequence of events similar to those which have made Austria an Eastern power, Russia has to resign herself to becoming an Asiatic one, from that day the empire of England in India will be in a critical condition.

(g). *May 2nd.*—This number contains a review written by M. R. Duval of Mr. Budge's Edition of the *Book of the Bee*.³ This work was written in the 13th century by Salomon, Metropolitan of Basrâ, who in the preface explains that just as the bee manufactures its honey from the nectar of flowers, so he has extracted from the Paradise of holy books, and of the works of the Fathers and

³ *The Book of the Bee*, Syriac text, and English translation by Ernest Wallis Budge. Anecdota Oxoniensia. Oxford, Clarendon Press, 1886.

the Doctors, the materials of his work, which commences with the creation of the world, and ends with the Apostles. The book is really a collection of legends founded on the narratives of the Old and New Testament. It is a specimen of the apocryphal literature popular amongst the Jews in the early part of the Christian era, like the *Cavern of Treasures* brought lately to notice by Dr Bezold.⁹ The *Book of the Bee* contains nothing original, and this, in the eyes of scholars, is its chief merit. It is a compilation from early apocryphal works, notably the *Cavern of Treasures* just mentioned. Where it deals with the times of the Patriarchs, Jewish sources are still visible. It contains traditions which were current in the Jewish schools of Palestine and Mesopotamia, and of which the *Talmuds*, *Targums* and *Midrasim* have preserved only a portion. Of course Salomon did not know the Jewish originals, but the Syriac texts on which he founded his compilation, contained the traces. As a specimen of the legends which he preserves may be mentioned the *Adventures of the thirty pieces of silver of Terah*, the father of Abraham, which finally came into the hands of Judas Iscariot. Mr. Budge is said to have given a very correct text with a faithful translation, illustrated with judicious notes and references. A useful glossary of words not found in Castel-Michael's dictionary or which are insufficiently explained therein, is also added.

(b). *May 30th*—M. A. Barth contributes an important review on Prof Peterson's edition of the **Subhāshitāvalī**. The work has been already noticed in this journal, Vol. XV, p. 240 ff., and an account of the contents of the article is unnecessary; but it is worth reading for the many acute and scholarly explanations of doubtful passages.

(i) *June 6th*—Dr. Pischel's edition of the *Spīngāratilaka* of Rudrata and of Ruyyaka's *Saḥpīdayalīlā* forms the text of a favourable review by M. Sylvain Levi.²⁰ The introduction of the work is chiefly devoted to a discussion as to whether Rudrata was author of the numerous erotic verses scattered through his well-known work on Rhetoric. The reviewer considers these twenty-five pages the richest chapter which has yet been written on the history of Indian rhetoric. Dr. Pischel does not content himself with collecting all the information available regarding Rudrata, his family, and his literary career; but, with the help of unpublished texts he fixes the most modern date to which we can assign

him, and throws unexpected light on the relative chronology of the oldest rhetoricians known. **Bhamaha, Udbhata, and Vāmana.** Rudrata could not have lived before the middle of the 9th century; while Udbhata and Vāmana belong to the 8th. These bases once fixed, Dr. Pischel essays to prove that all the illustrative verses are the work of Rudrata; but his arguments are insufficient to carry conviction to the mind of M. Lévi.

The *Sahridayalīlā*, published in the same volume is a simple formulary in five pages. Each of the four short chapters is only a list of words. The first, attributes and conditions of beauty; the second, adornments; the third, youth; the fourth, devices for enhancing beauty. The work is perhaps of the 10th century, and is a curious example of its class. The review speaks highly of the execution of the work, and considers that the publication of the text puts us in the possession of a charming poetic anthology; while the preliminary essay of Dr. Pischel, whatever be the value of his conclusions, will henceforth be a document indispensable to Indian scholars.

(j). *20th June*.—This number contains a review by Prof. James Darmesteter of M. A. Barthélemy's edition of the **Gujastak Abalish**, or account of a theological conference presided over by the Khalifa Māmūn (Pahlavi text published for the first time with translation, notes and glossary: Paris, Vieweg, 1887). This is the first work of the author. It is an account of a polemic controversy between Abalish, an apostate from Pārsism, and Atar Farrbāq, son of Farrukh-z't, Highpriest of the Pārsis at Fārs. The text is interesting and well edited, and the translation concise and clear.

This is followed by a long review by M. Salomon Romach on Dr. Penka's new work, *Der Herkunft der Arier*,¹¹ the descent of the Aryans. The work is a continuation of the same author's *Origines Ariæ*, published in 1887, in which he first suggested the Scandinavian origin of the Aryan family. The favour with which it has been received obliges the reviewer to analyze it in some detail. The author's etymological arguments are handled with some severity, and the article concludes 'M. Penka has been encouraged by enthusiastic criticisms which have saluted his book as "the definite solution of the Aryan Problem;" he will allow us, while rendering every homage to his talent, not to associate ourselves with his errors.'

G. A. GRILSON.

G. A. GIRLISON.

¹ V. Bezold, *Die Schattentheorie*, Leipzig, 1883.

¹⁰ *Radiation's Smear-theater and Reagan's Shipwreck*, with an introduction and notes, edited by Dr. R.

¹¹ A. N. Kozlov, *ibid.*, 1986, p. 2671.

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THE PROBABLE AGE OF SOME PALLAVA REMAINS.¹

THE history of the Pallavas, one of the mightiest royal families of the South, is still wrapped in obscurity, chiefly because none of their inscriptions are dated in the Śaka or any other well-known era. Besides, the identification of the names of kings which are mentioned in various inscriptions is very difficult and unsafe, as the Pallavas used to bear numerous *birudas*, or surnames, which were interchangeable with their real names. Thus the inscriptions in the first and second storeys of the Dharmarāja Ratha at the Seven Pagodas consist of a string of words in the nominative case, which were hitherto considered as names of deities, but which are in fact *birudas* of a Pallava king Narasiṃha; and the inscriptions of the Kailāsanātha Temple at Conjeveram (Kāñchīpuram) mention several hundred *birudas* of king Rājasiṃha of Kāñchi. The date of the king who founded the Kailāsanātha Temple can perhaps be fixed by comparing the following facts:

I. A Pallava inscription which was published by the Rev. T. Foulkes² gives the following succession of princes,—Siṃhaviṣṇu; Mahēndravarmān I.; Narasiṃhavarman I.; Mahēndravarmān II.; Paramēśvaravarman I.; Narasiṃhavarman II.; Paramēśvaravarman II.; Nandivarman.

II. An unpublished copper-plate inscription mentions the three kings,—Narasiṃhavarman I., Mahēndravarmān II., and Paramēśvaravarman I.; and calls Narasiṃhavarman I. the conqueror of Pulikēśi.

III. The inscriptions of the Kailāsanātha Temple itself mention three kings,—1, Agradāṇḍa or Lōkāditya, who destroyed the army and the town of Rāṇarasika; 2, his son Rājasiṃha, who built the principal part of the Kailāsanātha Temple, which he called Rājasiṃhēśvara; and 3, his son Mahēndravarmān, who constructed an additional building.

IV. An inscription published by Mr. Roose³ records that the Chālukya king Vikramāditya II. made an expedition into the Tundīkavishya or Tongajmandala, defeated the Pallava king Nandivarmān, and entered Conjeveram, where he gave heaps of gold to the stone temple called Rājasiṃhēśvara, which had been built by Narasiṃhapotavarman, and to other temples.

From a comparison of Nos. III. and IV. it follows that the founder of the Kailāsanātha, or Rājasiṃhēśvara Temple at Conjeveram, bore the two names Narasiṃhapotavarman and Rājasiṃha. This king and his son Mahēndravarmān must be taken to be identical with Narasiṃhavarman I. and

his son Mahēndravarmān II. in Nos. I. and II. This is done under the supposition that the names of Rājasiṃha's father, as given in No. III., are only *birudas*, and that his real name was Mahēndravarmān I., as recorded in No. I. Thus much granted, we may try to identify Pulikēśi, the enemy of Narasiṃhavarman I. in No. II., and Rāṇarasika, the enemy of Mahēndravarmān I. (*alias* Agradāṇḍa or Lōkāditya) in No. III. There were two Chālukya kings of the name Pulikēśi, the first a son of Rāṇarāga, and the second a son of Kirttivarman I. As Rāṇarāga and Rāṇarasika are synonyms and mean both "fond of war," we may identify the Rāṇarasika of No. III. with the Chālukya Rāṇarāga, and consequently the Pulikēśi of No. II. with the Chālukya Pulikēśi I. The Pallava Nandivarman mentioned in No. I. may be the same as Nandipōtavarman, the enemy of the Chālukya Vikramāditya II. in No. IV.; as No. I. gives four generations between Narasiṃhavarman I. and Nandivarman, while there were five generations between Pulikēśi I. and Vikramāditya II. As the first Pulikēśi's second son Mangaliśa reigned from A.D. 597 to 610, we may place the Chālukya Pulikēśi I. and his Pallava antagonist Narasiṃhavarman I. or Rājasiṃha, who founded the Kailāsanātha or Rājasiṃhēśvara Temple at Conjeveram, about A.D. 550. To the same period we may assign the Pallava king Atyantakāma; as the alphabet of his inscriptions at Māmallapuram is closely related to the alphabet of Rājasiṃha's and Mahēndravarmān's inscriptions at Conjeveram. Atyantakāma was the founder of the so-called Gaṇḍa Temple, Dharmarāja Maṇḍapa, and Rāmānuja Maṇḍapa at Māmallapuram; another inscription of his is found in the third storey of the Dharmarāja Ratha. The characters of Atirāṇachāṇḍa's inscription on the southern wall of the Śālvankuppam Cave somewhat differ from those of Atyantakāma's inscriptions. As in a verse, which is common to the inscriptions of both kings, Atyantakāma's inscription contains an erroneous reading, while Atirāṇachāṇḍa's has the correct one, I should place Atirāṇachāṇḍa before Atyantakāma. The inscriptions of the Dharmarāja Ratha at Māmallapuram, which, as stated above, belong to a Pallava king Narasiṃha, have been assigned by Dr. Burnell to about the fifth century A.D. for palaeographical reasons.⁴ Some Pallava coins, which the Rev. E. Loventhal, of Vellore, has collected at the Seven Pagodas, bear legends in still more archaic characters; three of the legends consist of *birudas* which are also found in the inscriptions of the Dharmarāja Ratha. It only

¹ From the *Madras Mail* of 15th December 1887.

² *Ibid.* Vol. VIII. p. 273B.

³ *Ibid.* Vol. VIII. p. 235.

⁴ *South Indian Palaeography*, p. 37.

remains for me to remark that, according to one of the three Tamil inscriptions at the so-called Shore Temple at Māmallapuram, this temple

seems to have been founded by a Pallava king Kshatriyasimha, about whose age nothing is known.

E. HULTZSCH.

BOOK NOTICES.

INSCRIPTIONS SANSKRITES DU CAMBODGE; par M. A. BARTH. Extrait des Notices et Extraits des Manuscrits de la Bibliothèque Nationale, tome xxvii. 1re partie. 180 pp. in 4to. Paris, Imprimerie Nationale, 1855. Atlas, dix-sept planches in folio.

The first fac-similes of inscriptions from Cambodia were published in 1873, by Francis Garnier, the well-known traveller, in his *Voyage d'exploration en Indo-Chine* (Paris, 1873). Unfortunately they escaped the notice of Indian scholars. Other fac-similes, however, published in Paris, in 1879 and 1880, by Dr. Harmand, in the *Annales de l'École Orientale*, attracted the attention of Dr. Kern in Leiden, who deciphered them with the help of the Indian and Javanese alphabets, recognised that the language of several of the inscriptions was Sanskrit, and gave an interpretation of them. And, just about the same time, Lieutenant (now Captain) Aymonier, French Resident in Cambodia, being well acquainted with the modern writing and language of that country, was able to decipher similar inscriptions, with the help of the Khm̃r alphabet, and to interpret some of them, written in the vernacular dialect (*Excursions et Reconnaissances*, fascicule IV. 1880). He also extracted from the inscriptions in the vernacular, chronological data for the age of the bilingual ones. Captain Aymonier profited by his stay at Phnom Penh, to collect inscriptions in the capital, and in Central Cambodia; and in 1882 he sent to the *Société Asiatique de Paris* more than twenty inscriptions, making a total of more than 1,500 stanzas, which were examined by a Committee, appointed by the Society, and composed of MM. Barth, Bergaigne, and Senart. The report of the Committee was drawn up by M. Bergaigne (*Journal Asiatique*, 1882, II. 139-230). With the materials in his hands, M. Bergaigne was enabled to make out a list of the kings of Cambodia, from the end of the sixth century to the beginning of the twelfth. The French Institute, alive to the historical, epigraphical, and philological interest of these monuments, applied to the French Government, in order that Captain Aymonier should be entrusted with an official mission to search for all remains of Cambodian epigraphy; and in 1883 Captain Aymonier sent to Paris 304 squeezes, of which 143 bear Sanskrit inscriptions, many of them containing more than one hundred stanzas. These documents extend over six centuries and allow us to follow the series of the Cambodian kings, without any interruption, nearly to the

time when manuscript history begins. How happy would the Indian epigraphists be, if they had the same good luck with any part of their vast domain! It was decided that these valuable monuments should be published under the auspices of the *Académie des Inscriptions et Belles-Lettres*, and thrown into scientific circulation as soon as possible. The materials sent by Captain Aymonier, were divided between the three members of the Committee. M. Barth has been the first to fulfil his task; and he has done it in the sound and thorough way which was to be expected from so accomplished a scholar.

M. Barth has presented us with the text, translation, and commentary of nineteen inscriptions. The text is given in Roman transcription; but the accompanying book of Plates gives magnificent photogravures of the squeezes, after the *procédé* Dujardin; so that the student has the monument itself in his hands. These inscriptions belong to the oldest epigraphy of Cambodia at present known; though further discoveries, which may always be looked for, as M. Aymonier is still in the field, may bring to light materials older still.

The time has not yet come to draw any general conclusions from the documents thus published. As M. Barth observes,—"Comme il arrive souvent en pareille matière, la préface ne pourra venir ici qu'à la fin du livre. C'est seulement lorsque la série entière des documents accessibles aura été publiée, que l'un de nous pourra essayer d'en retracer l'ensemble; de résumer l'histoire, hier inconnue, qu'ils nous révèlent; d'en coordonner les données parfois si instructives par le jour qu'elles jettent sur le développement social, religieux et littéraire, non-seulement de ces contrées lointaines, mais aussi de l'Inde propre; d'apprécier enfin l'étendue et la force de pénétration d'une civilisation hindoue que, naguère, encore on soupçonnait à peine, et qui, pourtant, était ancienne déjà à l'époque de nos premières inscriptions; puisqu'on peut en suivre la trace jusque chez Pe'lo'nes."

But a few special points in them may be noticed. The Indian inscriptions in Cambodia are as full of richness, and generally as devoid of direct and precise information, as those in India proper. They are almost all of them written to commemorate the erection of a temple, or of a *baup* or some religious donation; and expatiate on the greatness of Siva, or on the virtues of the king or his

ministers. They at least show us that, as early as the seventh century, the whole religious and philosophical system of classical India, and all its rhetoric and literary habits were naturalised in Cambodia. They show also that Śaivas, Vaiṣṇavas, and Buddhists lived then side by side, and in some sort of promiscuity; though Buddhism has now superseded its two Brāhmaṇical counterparts in Cambodia, as it has been superseded by them in India. Here and there we find some particular and precise detail, which throws an unexpected ray of light on literature or history. Everybody, for instance, knows how difficult it has been to find any testimony of undoubted antiquity about the Rāmāyaṇa and the Mahābhārata. But here we have (p. 39) a fragment of an inscription of the beginning of the seventh century, which informs us that, as early as that time, both epics were considered sacred on the border of distant Laos, and records that king Somaśarman presented a temple with copies of the *Rāmāyaṇa*, of the *Purāṇas*, and the *Bhārata* *complet*, and had them recited every day. Here is an authentic and well-dated counterpart to the mention, in the *Kādambarī*, of the public recitation of the *Mahābhārata* in temples (*qđ*, Peterson, p. 61): "qui peut prévoir les surprises de ce genre que nous réserve encore l'avenir, quand le sol qui recouvre cette vieille culture aura été mieux foulé, non-seulement là où en fut le centre, mais aux extrémités, dans toutes les contrées où s'est répandu l'Hindouisme, et qui en ont parfois, mieux que la mère patrie, conservé les vestiges."

Historical inscriptions, also, are not quite wanting. A long inscription at Prei Ngouk (p. 116 ff.) recites the victories of the *Satpāti* Saṃgrāma during the Śaka years 973-983, in his wars against Aravindabhadra, Kanyan, and Sivat,—the first of whom appears to have been the king of Champā. The account of these wars is given in a thoroughly epic style, which makes the passage quite unique in Sanskrit epigraphy.

The mention of that mysterious kingdom of Champā, which was hitherto known only from Chinese records, and the writings of Marco Polo, occurs frequently in these inscriptions; and lately M. Bergaigne has found in one of them a mention of the very king who reigned in the time of the Venetian traveller *Sai-Yuga-Sai*, *benarum Dēva*, called in the Chinese Annals *Ch'ei-Li-Sai-ya*, *Sai-ho-pai-lan*, *Ch'i-hi-ya*, *Ch'ou-pai-lan*, 1885, page 357.

Champā, as well as Cambodia, fell into the circle of Indian influence, and should also yield a rich harvest of Sanskrit inscriptions. Her epig-

raphy is bilingual, like Cambodia's. And, as the old vernacular of Cambodia is represented to this day by the modern Khmer, so the old vernacular of Champā is represented by the so-called Cham dialect, spoken by a few thousands, the last remnants of the Champā people. The vernacular epigraphy of Cambodia has not yet attracted as many workmen as it ought: and Captain Aymonier, whose services to science it is impossible to overvalue, is left alone. However, he has already been able to explain a few old inscriptions through the modern Khmer. He has now gone back as French resident in Binh Thuan, the very core of the old Champā kingdom; and though the political circumstances of the country are not likely to leave him much time to pursue his scientific researches, we may be sure that the epigraphical survey of Champā, which was one of the points on his programme, will be done in the same thorough way in which he has treated Cambodia and Laos.

CONTES CHAMLS: par A. LANDES, Saigon, Collège des Interprètes, 1886: pp. 17, xi, 359, 67, 238 in 8 vo.

The Chams are the old inhabitants of Champā. Their primitive name, as found out by M. Bergaigne in the old Sanskrit inscriptions from Champā, was Chama, which the Hindu invaders, in their usual way, Sanskritized into Champā, a familiar name in their own geographical nomenclature.¹ The few existing remnants of this people are chiefly to be found in the province of Binh Thuan. It is high time to study their dialect, as it is rapidly dying out before the progressing march of the Cambodian and the Annamite. M. Landes, the director of the Collège des Interprètes at Saigon, a thorough Annamite scholar and one of the best contributors to that valuable magazine for Indo-Chinese knowledge, the *Excursions et Reconnaissances*, is to be deeply thanked for this volume, the first Cham text published to this day. It is a collection of eleven Cham tales in the original character, with a transcription of the first tale in Roman characters, and a vocabulary to the whole. M. Landes had those tales from the lips of a few Chams, whom Captain Aymonier had brought back with him to Saigon from his epigraphic mission to Laos and Binh Thuan. The translation will be published in the *Excursions*. On the grammar of the Cham Language, the only information available to this day, is to be found in a short sketch given by Captain Aymonier in 1881, in the *Excursions* (IV, 167-186), we understand that he is going to resume it in an *étude d'ensemble* on the Chama dialects.

¹ *Satires* of the Académie des Inscriptions et Belles-Lettres, 10 July 1887.

THE BAKHSHALI MANUSCRIPT.

BY DR. A. F. RUDOLF HOERNLE.

THE Bakhshali manuscript was found, as probably the readers of this Journal (*ante*, Vol. XII. p. 89 f.) will recollect, in May 1881, near a village called Bakhshali, lying in the Yūsufzāi Subdivision of the Peshāwar District at the extreme North-Western frontier of India.¹ It was dug out by a peasant in a ruined enclosure, where it lay between stones. After the find it was at once forwarded to the Lieutenant-Governor of the Panjāb who transmitted it to me for examination and eventual publication.

The manuscript is written in **Sāradā characters** of a rather ancient type, and on **leaves of birch-bark** which from age have become dry like tinder and extremely fragile. Unfortunately, probably through the careless handling of the finder, it is now in an excessively mutilated condition, both with regard to the size and the number of the leaves. Their present size (see Plate²) is about 6 by $3\frac{1}{4}$ inches; their original size, however, must have been about 7 by $8\frac{1}{2}$ inches. This might have been presumed from the well-known fact that the old birch-bark manuscripts were always written on leaves of a squarish size. But I was enabled to determine the point by a curious fact. The mutilated leaf which contains a portion of the twenty-seventh *sūtra* shows at top and bottom the remainders of two large square figures, such as are used in writing arithmetical notations. These, when completed, prove that the leaf in its original state must have measured approximately 7 by $8\frac{1}{2}$ inches. The number of the existing leaves is seventy. This can only be a small portion of the whole manuscript. For neither beginning nor end is preserved; nor are some leaves forthcoming which are specifically referred to in the existing fragments.³ From all appearances, it must have been a large work, perhaps divided into chapters or sections. The existing leaves include only the middle portion of the work or of a division of it. The earliest *sūtra* that I have found is the ninth; the latest is the fifty-seventh. The lateral margins which

usually exhibit the numbering of the leaves are broken off. It is thus impossible even to guess what the original number of the leaves may have been.

The leaves of the manuscript, when received by me, were found to be in great confusion. Considering that of each leaf the top and bottom (nearly two-thirds of the whole leaf) are lost, thus destroying their connection with one another, it may be imagined that it was no easy task to read the fragments and arrange them in order. After much trouble I have read and transcribed the whole, and have even succeeded in arranging in consecutive order a not inconsiderable portion of the leaves containing eighteen *sūtras*. The latter portion I have also translated into English.

The beginning and end of the manuscript being lost, both the name of the work and of its author are unknown. The subject of the work, however, is **arithmetic**. It contains a great variety of problems relating to daily life. The following are examples:—"In a carriage, instead of 10 horses, there are yoked 5; the distance traversed by the former was one hundred, how much will the other horses be able to accomplish?" The following is more complicated:—"A certain person travels 5 *yōjanas* on the first day, and 3 more on each succeeding day; another who travels 7 *yōjanas* on each day, has a start of 5 days; in what time will they meet?" The following is still more complicated:—"Of 3 merchants the first possesses 7 horses, the second 9 ponies, the third 10 camels; each of them gives away 3 animals to be equally distributed among themselves, the result is that the value of their respective properties becomes equal: how much was the value of each merchant's original property, and what was the value of each animal?" The method prescribed in the rules for the solution of these problems is extremely mechanical, and reduces the labour of thinking to a minimum. For example, the last mentioned problem is solved thus:—"Subtract the gift (3) severally from the original quantities (7, 9, 10). Multiply

¹ See *Proceedings of the Asiatic Society of Bengal*, for 1882, p. 108.

² A transcript and explanation of this plate will be found in note 6, on p. 47, at the end of this article.

³ Thus at the end of the 10th *sūtra*, instead of the usual explanation, there is the following note: "*From sūtra 10 dātīya-patir vyavasthā*." The second leaf here referred to is not preserved.

the remainders (4, 6, 7) among themselves (168, 168, 168). Divide each of these products by the corresponding remainder ($\frac{168}{4}, \frac{168}{6}, \frac{168}{7}$). The results (42, 28, 24) are the values of the 3 classes of animals. Being multiplied with the numbers of the animals originally possessed by the merchants ($42 \times 7; 28 \times 9, 24 \times 10$), we obtain the values of their original properties (294, 252, 240). The value of the property of each merchant after the gift is equal (262, 262, 262)." The rules are expressed in very concise language, but are fully explained by means of examples. Generally there are two examples to each rule (or *sūtra*), but sometimes there are many; the twenty-fifth *sūtra* has no less than fifteen examples. The rules and examples are written in verse; the explanations, solutions, and all the rest are in prose. The metre used is the *śloka*.

The subject-matter is divided in *sūtras*. In each *sūtra* the matter is arranged as follows: First comes the rule, and then the example introduced by the word *udāharaṇa*.* Next, the example is repeated in the form of a notation in figures, which is called *sthāpana*. This is followed by the solution which is called *karāṇa*. Finally comes the proof, called *pratyaya*. This arrangement and terminology differ somewhat from those used in the arithmetic of Brahmagupta and Bhāskara. Instead of simply *sūtra*, the latter use the term *karāṇa-sūtra*. The example they call *uldēśaka* or *udāharaṇa*. For *sthāpana* they say *nuāsa*. As a rule they give no full solution or proof, but the mere answer to the problem. Occasionally a solution is given, but it is not called *karāṇa*.

The system of notation used in the Bakhshālī arithmetic is much the same as that employed in the arithmetical works of Brahmagupta and Bhāskara.⁵ There is, however, a very important exception. The sign for the negative quantity is a cross (+). It looks exactly like our modern sign for the positive quantity, but it is placed after the number which it qualifies. Thus $\frac{12}{1} \frac{7}{1} +$ means $12 - 7$ (i. e. 5). This is a sign which I have not met with in any other Indian arithmetic, nor, so far as I have been able to ascertain, is it now known in India at

all. The sign now used is a dot placed over the number to which it refers. Here, therefore, there appears to be a mark of great antiquity. As to its origin I am unable to suggest any satisfactory explanation. I have been informed by Dr. Thibaut of Benares, that Diophantos in his Greek arithmetic uses the letter ψ (short for $\epsilon\lambda\lambda\epsilon\psi\iota\varsigma$) reversed (thus ϕ) to indicate the negative quantity. There is undoubtedly a slight resemblance between the two signs; but considering that the Hindus did not get their elements of the arithmetical science from the Greeks, a native Indian origin of the negative sign seems more probable. It is not uncommon in Indian arithmetic to indicate a particular factum by the initial syllable of a word of that import subjoined to the terms which compose it. Thus addition may be indicated by *yu* (short for *yuta*), e. g., $\frac{5}{1} \frac{7}{1} yu$ means $5 + 7$ (i. e. 12). In the case of subtraction or the negative quantity, *ṛiṇa* would be the indicatory word and *ṛi* the indicatory syllable. The difficulty is to explain the connection between the letter *ṛi* (ऋ) and the symbol +. The latter very closely resembles the letter *k* (क) in its ancient shape (+) as used in the Aśoka alphabet. The only plausible suggestion I can make is, that it is the abbreviation (*ku*) of the word *kanita* 'diminished,' from the root *kanaya*, with which the well-known words *kanīyas*, 'younger' *kanīshtha* 'youngest,' *kanyā* 'maiden,' *kana* or *kaṇa* 'a small piece,' etc., are connected. It is true the occurrence of the participle *kanita*, as far as I am aware, is not authenticated in the existing Sanskrit literature. But it would be a regular formation, and might have been in use in the old North-Western Prākṛit of the Buddhists or Jains (see below). Another suggestion is, that the sign represents the syllable *nū* (Prākṛit for *nyū*), an abbreviation of *nyūna*, 'diminished.' The *ak-hara* for *nū* (or *nu*) in the Aśoka characters would very closely resemble a cross (+). The difficulty about these and similar suggestions is to account for the retention of an obsolete graphic symbol in the case of the negative sign only. If the sign is really the old symbol for *ku*, its retention

* This word is almost uniformly abbreviated *udā*. Owing to the graphic symbols for *u* and *ā* being indistinguishable, I at first took the word to be complete and read it *udā*. But quite lately I found on a fragment,

which had hitherto escaped my notice, the word written in full *udāharaṇa*.

⁵ See Gutschrooke's *Dissertation on the Algebra of the Hindus*, in his *Essays*, Vol. II pp. 337 ff.

might perhaps be explained by the fact, that, in its transfer to the Śāradā alphabet, the letter *ka* has suffered less change of form than many others of the old Aśōka characters. However, for the present, the question must be left an open one.

A whole number, when it occurs in an arithmetical operation, as may be seen from the above given examples, is indicated by placing the number 1 under it. This, however, is a practice which is still occasionally observed in India. It may be worth noting that the number 1 is always designated by the word *rūpa*:⁶ thus *surūpa* or *rūpādhiḥ* 'adding one,' *rūpāna* 'deducting one.' The only other instance of the use of a symbolic numeral word is the word *rasa* for 'six,' which occurs once in an example in the fifty-third *sūtra*.

The following statement, from the first example of the twenty-fifth *sūtra*, affords a good example of the system of notation employed in the Bakhshālī arithmetic:—

$$\begin{array}{c} \bullet \quad 1 \quad 1 \quad 1 \\ 1 \quad 1 \quad 1 \quad 1 \\ 3+ \quad 3+ \quad 3+ \end{array} \text{ bhā } 32 \quad \text{ phalaṁ } 108$$

Here the initial dot is used very much in the same way as we use the letter *x* to denote the unknown quantity the value of which is sought. The number 1 under the dot is the sign of the whole (in this case, unknown) number. A fraction is denoted by placing one number under the other without any line of separation; thus $\frac{1}{3}$ is $\frac{1}{3}$, i. e. one-third. A mixed number is shown by placing the three numbers under one another: thus $1\frac{1}{3}$ is $1 + \frac{1}{3}$ or $1\frac{1}{3}$, i. e. one and one-third. Hence $1\frac{1}{3+}$ means $1 - \frac{1}{3}$ (i. e. $\frac{2}{3}$).

Multiplication is usually indicated by placing the numbers side by side; thus

$$3 \frac{32}{1} \text{ phalaṁ } 20,$$

means $3 \times 32 = 20$. Similarly $1\frac{1}{3+} \frac{1}{3+} \frac{1}{3+}$

means $\frac{1}{3} \times \frac{1}{3} \times \frac{1}{3}$ or $(\frac{1}{3})^3$, i. e. $\frac{1}{27}$. *Bhā* is an abbreviation of *bhāga*, 'part,' and means that the number preceding it is to be treated as a denominator. Hence $1\frac{1}{3+} \frac{1}{3+} \frac{1}{3+}$ *bhā* means $1 \cdot \frac{1}{27}$ or $\frac{27}{27}$. The whole statement, therefore

$$\begin{array}{c} \bullet \quad 1 \quad 1 \quad 1 \\ 1 \quad 1 \quad 1 \quad 1 \\ 3+ \quad 3+ \quad 3+ \end{array} \text{ bhā } 32 \quad \text{ phalaṁ } 108$$

means $\frac{27}{27} \times 32 = 108$, and may be thus explained,—“a certain number is found by dividing with $\frac{8}{27}$ and multiplying with 32: that number is 108.”

The dot is also used for another purpose, namely as one of the ten fundamental figures of the decimal system of notation, or the zero (0 1 2 3 4 5 6 7 8 9). It is still so used in India for both purposes, to indicate the unknown quantity as well as the naught. With us the dot, or rather its substitute the circle (0), has only retained the latter of its two intents, being simply the zero figure, or the 'mark of position' in the decimal system. The Indian usage, however, seems to show how the zero arose, and that it arose in India. The Indian dot, unlike our modern zero, is not properly a numerical figure at all. It is simply a sign to indicate an empty place or a hiatus. This is clearly shown by its name *śūnya* 'empty.' The empty place in an arithmetical statement might or might not be capable of being filled up, according to circumstances. Occurring in a row of figures arranged decimally or according to the 'value of position,' the empty place could not be filled up, and the dot therefore signified 'naught,' or stood in the place of the zero. Thus the two figures 3 and 7, placed in juxtaposition (37) mean 'thirty-seven,' but with an 'empty space' interposed between them (3 7), they mean 'three hundred and seven.' To prevent misunderstanding the presence of the 'empty space' was indicated by a dot (3 • 7); or by what is now the zero (307). On the other hand, occurring in the statement of a problem, the 'empty place' could be filled up, and here the dot which marked its presence, signified a 'something' which was to be discovered and to be put in the empty place. In the course of time, and out of India, the latter signification of the dot was discarded; and the dot thus became simply the sign for 'naught' or the zero, and assumed the value of a proper figure of the decimal system of notation, being the 'mark of position.' In its double signification, which

⁶ This word was at first read by me *rupa*. The reading *rupa* was suggested to me by Professor A. Weber

of Berlin and it is, I have now no doubt, the correct one

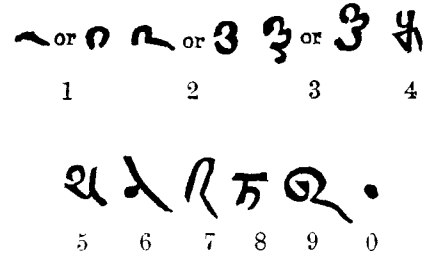
still survives in India, we can still discern an indication of that country as its birthplace.

Generally speaking, the terms of an operation are set down side by side: and the particular operation intended is indicated by the initial syllable of a word of that import, subjoined to the terms which compose it. The operation of multiplication alone is not indicated by any special sign. Addition is indicated by *yu* (for *yuta*), subtraction by *+* (*ka* for *kanita*?) and division by *bhā* (for *bhāḡa*). The whole operation is commonly enclosed between lines (or sometimes double lines), and the result is set down outside, introduced by *pha* (for *phala*). Occasionally the indicatory word is written in full. Vertical lines are usually interposed between the terms of a proportion or a progression. Thus:—

$$\begin{array}{l} \left| \begin{array}{c} 5 \quad 7 \\ 1 \quad 1 \end{array} \right| yu \left| pha \quad 12 \right. \text{ means } 5 + 7 = 12 \\ \left| \begin{array}{c} 12 \quad 7 \\ 1 \quad 1 \end{array} \right| + \left| pha \quad 5 \right. \text{ „ } 12 - 7 = 5 \\ \left| \begin{array}{c} 5 \quad 32 \\ 3 \quad 1 \end{array} \right| pha \quad 20 \text{ „ } \frac{5}{3} \times 32 = 20 \\ \left| \begin{array}{c} 1 \quad 1 \quad 1 \\ 1 \quad 1 \quad 1 \\ 3+3+3+ \end{array} \right| bhā \quad 32 \left| pha \quad 108 \right. \text{ „ } (1:\frac{8}{27}) \times 32 = 108 \\ \left| \begin{array}{c} 10 \quad 30 \\ 1 \quad 1 \end{array} \right| \left| \begin{array}{c} 4 \\ 1 \end{array} \right| pha \quad \frac{12}{1} \text{ „ } 10 : 30 = 4 : 12 \end{array}$$

Regarding the age of the manuscript, I am unable to offer a very definite opinion. The composition of a Hindu work on arithmetic, such as that contained in the Bakhshālī MS., seems necessarily to presuppose a country and a period in which Hindu civilisation and Brāhmaṇical learning flourished. Now the country in which Bakhshālī lies and which formed part of the Hindu kingdom of Kābul, was early lost to Hindu civilisation through the conquests of the Muḥammadan rulers of Ghazni, and especially through the celebrated expeditions of Maḥmūd, towards the end of the 10th and the beginning of the 11th centuries A. D. In those troublous times it was a common practice for the learned Hindus to bury their manuscript treasures. Possibly the Bakhshālī MS. may be one of these. In any case it cannot well be placed much later than the 10th century A. D. It is quite possible that it may be somewhat older. The Śāradā characters used in it, exhibit in several respects a rather archaic type, and afford some ground for thinking that the manuscript may perhaps go back to the 8th or

9th century. But in the present state of our epigraphical knowledge, arguments of this kind are always somewhat hazardous. The usual form in which the numeral figures occur in the manuscript are the following:—



Quite distinct from the question of the age of the manuscript, is that of the age of the work contained in it. There is every reason to believe that the Bakhshālī arithmetic is of a very considerably earlier date than the manuscript in which it has come down to us. I am disposed to believe that the composition of the former must be referred to the earliest centuries of our era, and that it may date from the 3rd or 4th century A.D. The arguments making for this conclusion are briefly the following:—

In the first place, it appears that the earliest mathematical works of the Hindus were written in the *ślōka* measure ;⁷) but from about the end of the 5th century A.D. it became the fashion to use the *āryā* measure. Āryabhaṭa c. 500 A.D., Varāhamihira c. 550, Brahmagupta c. 630, all wrote in the latter measure. Not only were new works written in it, but also *ślōka*-works were revised and recast in it. Now the Bakhshālī arithmetic is written in the *ślōka* measure; and this circumstance carries its composition back to a time anterior to that change of literary fashion in the 5th century A. D.

In the second place the Bakhshālī arithmetic is written in that peculiar language which used to be called the **Gāthā dialect**, but which is rather the literary form of the ancient North-Western Prākṛit (or Pāli). It exhibits a strange mixture of what we should now call Sanskrit and Prākṛit forms. As shown by the inscriptions (e.g. of the Indo-Scythian kings in Mathurā) of that period, it appears to have been in general use in North-Western India, for literary purposes till about the end of the

⁷ See Professor Kern's Introduction to the *Bṛhat Saṃhitā* of Varāhamihira.

3rd century A. D., when the proper Sanskrit, hitherto the language of the Brāhmaṇic schools, gradually came into general use also for secular compositions. The older literary language may have lingered on some time longer among the Buddhists and Jains, but this would only have been so in the case of religious, not of secular, compositions. Its use, therefore, in the Bakhshālī arithmetic points to a date not later than the 3rd or 4th century A. D. for the composition of that work.

In the third place, in several examples, the two words *dināra* and *dramma* occur as denominations of money. These words are the Indian forms of the Latin *denarius* and the Greek *drakhmē*. The former, as current in India, was a gold coin, the latter a silver coin. Golden *denarii* were first coined at Rome in B. C. 207. The Indian gold pieces, corresponding in weight to the Roman gold *denarius*, were those coined by the Indo-Scythian kings, whose line, beginning with Kadphises, about the middle of the 1st century B. C., probably extended to about the end of the 3rd century A.D. Roman gold *denarii* themselves, as shown by the numerous finds, were by no means uncommon in India, in the earliest centuries of our era. The gold *dināras* most numerous found are those of the Indo-Scythian kings Kanishka and Huviska, and of the Roman emperors Trajan, Hadrian and Antoninus Pius, all of whom reigned in the 2nd century A.D. The way in which the two terms are used in the Bakhshālī arithmetic seems to indicate that the gold *dināra* and the silver *dramma* formed the ordinary currency of the day. This circumstance again points to some time within the three first centuries of the Christian era as the date of its composition.

A fourth point, also indicative of antiquity, which I have already adverted to, is the peculiar use of the cross (+) as the sign of the negative quantity.

There is another point which may be worth mentioning, though I do not know whether it may help in determining the probable date of the work. The year is reckoned in the Bakhshālī arithmetic as consisting of 360 days. Thus in one place the following calculation is given:—“If in $\frac{800}{727}$ of a year, $29 \times 2 \frac{46}{727}$ is spent,

how much is spent in one day?” Here it is explained that the lower denomination (*atīta-chaksheda*) is 360 days, and the result (*phala*) is given as $\frac{1807}{240}$ (i.e. $\frac{2165400}{727} \div \frac{727}{360}$).

In connection with this question of the age of the Bakhshālī work, I may note a circumstance which appears to point to a peculiar connection of it with the *Brahma-Siddhānta* of Brahmagupta. There is a curious resemblance between the fiftieth *sūtra* of the Bakhshālī arithmetic, or rather with the algebraical example occurring in that *sūtra*, and the forty-ninth *sūtra* of the chapter on algebra in the *Brahma-Siddhānta*. In that *sūtra*, Brahmagupta first quotes a rule in prose, and then adds another version of it in the *āryā* measure. Unfortunately the rule is not preserved in the Bakhshālī MS., but, as in the case of all other rules, it would have been in the form of a *śloka* and in the North-Western Prakrit (or Gāthā dialect). Brahmagupta in quoting it, would naturally put it in what he considered correct Sanskrit prose, and would then give his own version of it in his favourite *āryā* measure.⁸ I believe it is generally admitted that Indian arithmetic and algebra, at least, are of entirely native origin. While *Siddhānta*-writers, like Brahmagupta and his predecessor Āryabhata, might have borrowed their astronomical elements from the Greeks or from books founded themselves on Greek science, they took their arithmetic from native Indian sources. Of the Jains it is well known that they possess astronomical books of a very ancient type, showing no traces of western or Greek influence. In India arithmetic and algebra are usually treated as portions of works on astronomy. In any case it is impossible that the Jains should not have possessed their own treatises on arithmetic, when they possessed such on astronomy. The early Buddhists, too, are known to have been proficient in mathematics. The prevalence of Buddhism in North-Western India, in the early centuries of our era, is a well-known fact. That in those early times there were also large Jain communities in those regions, is testified by the remnants of Jain sculpture found near Matharā and elsewhere. From the fact of

⁸ See note 4 at the end of this article, also note 5.

the general use of the North-Western Prākṛit (or the 'Gāthā dialect') for literary purposes among the early Buddhists it may reasonably be concluded that its use prevailed also among the Jains, between whom and the Buddhists there was so much similarity of manners and customs. There is also a diffusedness in the mode of composition of the Bakhshālī work which reminds one of the similar characteristic observed in Buddhist and Jain literature. All these circumstances put together seem to render it probable that in the Bakhshālī MS. there has been preserved to us a fragment of an early Buddhist or Jain work on arithmetic (perhaps a portion of a larger work on astronomy), which may have been one of the sources from which the later Indian astronomers took their arithmetical information. These earlier sources, as we know, were written in the *ślōka* measure, and when they belonged to the Buddhist or Jain literature, must have been composed in the ancient North-Western Prākṛit. Both these points are characteristics of the Bakhshālī work. I may add that one of the reasons why the earlier works were, as we are told by tradition, revised and re-written in the *āryā* measure by later writers such as Brahmagupta, may have been that in their time the literary form ('Gāthā dialect') of the North-Western Prākṛit had come to be looked upon as a barbarous and ungrammatical jargon as compared with their own classical Sanskrit. In any case the Buddhist or Jain character of the Bakhshālī arithmetic would be a further mark of its high antiquity.

Throughout the Bakhshālī arithmetic the decimal system of notation is employed. This system rests on the principle of the 'value of position' of the numbers. It is certain that this principle was known in India as early as A. D. 500. There is no good reason why it should not have been discovered there considerably earlier. In fact, if the antiquity of the Bakhshālī arithmetic be admitted on other grounds, it affords evidence of an earlier date of the discovery of that principle. As regards the zero, in its modern sense of a 'mark of position' and one of the ten fundamental figures of the decimal system (0 1 2 3 4 5 6 7 8 9), its discovery, or rather its elaboration, is undoubtedly much later than the discovery of the 'value of position.' It is quite certain, however that

the application of the latter principle to numbers, in ordinary writing, would have been nearly impossible without the employment of some kind of 'mark of position,' or some mark to indicate the 'empty place' (*śūnya*). Thus the figure 7 may mean either 'seven' or 'seventy' or 'seven hundred,' according as it be or be not supposed to be preceded by one (7 • or 70) or two (7 • • or 700) 'empty places.' Unless the presence of these 'empty places' or the 'position' of the figure 7 be indicated, it would be impossible to read its 'value' correctly. Now what the Indians did, and indeed still do, was simply to use for this purpose the sign which they were in the habit of using for the purpose of indicating *any* empty place or omission whatsoever in a written composition: that is the dot. It seems obvious from the exigencies of writing that the use of the well-known dot as the mark of an empty place must have suggested itself to the Indians as soon as they began to employ their discovery of the principle of the 'value of position' in ordinary writing. In India the use of the dot as a substitute for the zero must have long preceded the discovery of the proper zero, and must have been contemporaneous with the discovery of the principle of the 'value of position.' There is nothing in the Bakhshālī arithmetic to show that the dot is used as a proper zero, and that it is anything more than the ordinary 'mark of an empty place.' The employment, therefore, of the decimal system of notation such as it is, in the Bakhshālī arithmetic, is quite consistent with the suggested antiquity of it.

I have already stated that the Bakhshālī arithmetic is written in the so-called *Gāthā dialect* or in that literary form of the North-Western Prākṛit which preceded the employment, in secular composition, of the classical Sanskrit. Its literary form consisted in what may be called (from the Sanskrit point of view), an imperfect sanskritisation of the vernacular Prākṛit. Hence it exhibits at every turn the peculiar characteristics of the underlying vernacular. The following are some specimens of orthographical peculiarities:—

Insertion of euphonic consonants: of *m*, in *eka-m-ekatraṁ*, *bhūtakū-m-ekapaṇḍitah*; of *ṛ*, in *tri-r-asu*, *labhat-ṛ-r-ashton*.

Insertion of *s*, in *vibhaktāṁ-s-uttarē*, *kshiyatē*.

s-traya. This is a peculiarity not known to me elsewhere, either in Prākṛit or in Pāli.

Doubling of consonants: in compounds, *prathamā-d-dhāntē*, *ēka-s-saṅkhyā*; in sentences *yadi-sh-shadbhi*, *ētē-s-samadhanā*.

Peculiar spellings: *triṅśā* or *triṅśa* for *triṅśat*. The spelling with the guttural nasal before *ś* occurs only in this word; not otherwise. e. g. *chatvālīṅśa* 40. Again *ṛi* for *ri* in *triṇīṇē*, *kṛiyatē*, *vimīśritāṇ*, *kṛiṇāti*; and *ṛi* for *ri* in *vināṇ*, *drishṭāḥ*. Again *katthyatāṇ* for *kathya-tāṇ*. Again the *jihvāmūliya* and the *upa-dhmāniya* are always used before gutturals and palatals respectively.

Irregular sandhi: *kō sō rā°* for *kaḥ sa rā°*, *dvayō kēchi* for *dvayaḥ k°*, *dvayō cha* for *dvayaś cha*, *dvibhi kri°* for *dvibhiḥ kri°*, *ādyō vi°* for *ādyōr vi°*, *vivaritāsti* for *vivaritam asti*.

Confusion of the sibilants: *ś* for *sh*, in *śasṭhi* 60, *māsakō*; *sh* for *ś*, in *daśāṅśa*, *viśv-dhayēt*, *ślēśmāṇ*; *ś* for *s*, in *sāsyam*, *sāsyatām*; *s* for *sh*, in *ēsa* 'this.'

Confusion of *ṇ* and *n*: *utpaṇṇa* for *utpanna*; *kshayēna* for *kshayeṇa* (s. 27); *viṇyastam* for *vinastyam*.

Elision of a final consonant: *bhājayē*, *kēchi*, for *bhājayēt*, *kēchit*.

Interpolation of *r*: *hrīṇam* for *hīnam*.

The following are specimens of etymological and syntactical peculiarities:—

Absence of inflection: nom. sing. masc., *ēsa sā rāsi* for *rāsiḥ* (s. 50), *garvām viśēsha kartarṇam* for *viśēshaḥ* (s. 51); nom. plur., *sērya santi* for *sēryāḥ* (s. 53); acc. plur., *dindra dattavān* for *dindrān* (s. 53).

Peculiar inflection: gen. sing., *gatisya* for *gātch* (s. 15); parasm. for ātm., *vikṛiṇāti* for *vikṛiṇāte* 'he sells' (s. 54), ātm. for parasm., *ārjayatē* for *arjayati* 'he earns' (s. 53).

Change of gender: masc. for neut., *mūlā* for *mūlāni* (s. 55); neut. for masc., *carṇam* for *carṇaḥ* (s. 50); neut. for fem., *yutīm cha kartarṇā* for *yutis* (s. 50).

Exchange of numbers: plur. for sing., (*bharēti*) *lābhāḥ* for *lābhaḥ* (s. 54).

Exchange of cases: acc. for nom., *dvitīyam ārjayatē baddhaḥ* for *dvitīyaḥ* (s. 53), acc. for instr., *kshayam saṅkhyā* for *kshayēna* (s. 27); acc. for loc., *kām kalam* for *kāsmi kālē* (s. 52); instr. for loc., *anēna kālēna* for *asmīn kālē* (s. 53); instr. for nom., *prathamēna dattavān* for *prathamō* (s. 53), or *ēkēna yātē*

for *ēkō* (s. 15); loc. for instr., *prathamē dattā* for *prathamēna* (s. 53), or *mānavē grihitam* for *mānavēna* (s. 57); gen. for dat., *dvitīyasya dattā* for *dvitīyāya* (s. 53).

Abnormal concord: incongruent cases, *ayanḥ prashṭ* for *asmīn* (s. 52); incongruent numbers, *ēsa lābhāḥ* for *lābhaḥ* (s. 54), *rājaputrō kēchi* for *rājaputrāḥ* (s. 53); incongruent genders, *sā kalam* for *tat kalam* (s. 52), *viśēsha kartarṇam* for *kartarṇaḥ* (s. 51), *sā rāsiḥ* for *sa* (s. 50), *kāryam sthitaḥ* for *sthitam* (s. 14).

Peculiar forms: *nivarita* for *nirvṛita*, *rāja* for *ājana*, *divaddha* 'one and one-half,' *chatvālīṅśa* 40, *pañchāsama* 50th, *chaupañchāsama* 54th, *chaturīṣṭi* 84, *tri-r-āṣṭi* 83, *piṇyasē* (v. l. *viṇyasē*) for *apiṇyasē*, *bhājayēta* 'let it be divided' for *bhājyēta* (s. 27).

Peculiar meanings: *yadpichchhā*, or *kāmikaṇ* for the 'number one,' when representing the unknown quantity of which the value is sought.

The following extracts may serve as specimens of the text:—

TEXT.

18th Sūtra.

Ādyōr viśēshadviguṇam chayaśuddhivibhā-jam |

Rūpādhikam tathā kalam gatisāsyam tadā bhavāt ||

Udā ||

Dvayāditṛichayaś chaiva dvichayatṛyādikōt-taraḥ |

Dvayō cha bhavāt paṁthā kēna kālina sāsyatām ||

sthāpanam kṛiyat | ēśām | ā 2 | u 1 | pa 1 |

dvi | ā 1 | u 2 | pa 1 | karaṇam || ādyōr viśēsha

.....

..... tā dvi 2

.....

.....

Udā ||

..... |

..... ||

ā 5 | u 6 | pa 1 | dha 1 | karaṇam | ādyōr viśē-

ā 10 | u 3 | pa 1 | dha 1 | sham ādi 5 | 10

viśēsha 5 | chayaśud-

dhi chayaṁ 6 | 3 śuddhi 3 ādiś sha 5 dviguṇam

10 uttaraviśēsha 3 vibhaktam 10 sarūpam 13

sha pa lam anēna kālēna samadhanā bhavanti ||

pratyayam || rūpōnakaraṇa phalam $\left\{ \begin{smallmatrix} 65 \\ \text{dvi } 65 \end{smallmatrix} \right\}$ |
 Aṣṭhādaśamasūtram 18 || + ||

27th Sūtra.

Idānīm suvarṇakṣhayam vakṣhyāmi yasyēdām
 sūtram |

Kṣhayam saṃguṇya kanakās tadyutir-b-
 bhājayēt tataḥ |

Saṃyutair ēva kanakair ekaikaṣya kṣhayō
 hi saḥ ||

Udā ||

Ēkadvitricchatussamkhyasavarṇā māśakai ri-
 nai |

Ēkadvitricchatussamkhyai rabita⁹ samabhā-
 gatām ||

sthāpanam kṛiyat¹⁰ | śhām $\left\{ \begin{smallmatrix} 1- & 2+ & 3+ & 4+ \\ 1 & 2 & 3 & 4 \end{smallmatrix} \right\}$ |

karaṇam || kṣhayam saṃguṇya kanakādibhi
 kṣhayēna saṃguṇya jātam | 1 | 4 | 9 | 16 | tad-
 yuti | śha yuti 30 kanakā yuti 10 anēna
 bhaktvā labdham

| | | | | | | |
|--|----|----|---|-----|------|----|
| | 10 | 30 | 1 | pha | māśē | 3 |
| | 1 | 1 | 1 | | | 1 |
| | 10 | 30 | 2 | pha | māśē | 6 |
| | 1 | 1 | 1 | | | 1 |
| | 10 | 30 | 3 | pha | māśē | 9 |
| | 1 | 1 | 1 | | | 1 |
| | 10 | 30 | 4 | pha | māś | 12 |
| | 1 | 1 | 1 | | | 1 |

Udā ||

Ēkadvitricchatussamkhyasavarṇa prōjjhitā
 ime |

Māśakā dvitritām chaiva chatuḥpañchaka-
 rāmśakam¹⁰ kim kṣhayam ||

$\left\{ \begin{smallmatrix} 1 & 2 & 3 & 4 \\ 1 & 1 & 1 & 1 \\ 2 & 3 & 4 & 5 \end{smallmatrix} \right\}$ karaṇam | kṣhayam saṃguṇya
 kanakā śha sthāpyatē $\left\{ \begin{smallmatrix} 1 & 2 & 3 & 4 \\ 2 & 3 & 4 & 5 \end{smallmatrix} \right\}$ |

-s-tadyutir-b-bhājayēt¹¹ tataḥ harasāsy-

kṛit¹² yutam $\left\{ \begin{smallmatrix} 163 \\ 60 \end{smallmatrix} \right\}$ saṃyutair kanakair bhaktvā

tadā kanakā 10 anēna bhaktvā jātam $\left\{ \begin{smallmatrix} 163 \\ 60 \end{smallmatrix} \right\}$

śha ekaikasavarṇasya kṣhayam || pratyayam
 trairāśik na kartavya ||

⁹ The two first letters (*rahi*) are uncertain, owing to a defect in the texture of the leaf.

¹⁰ Read *chatuḥpañchakam* and *kṛit kṣhayam*, metri causa.

¹¹ Here 12 is omitted in the MS., by mistake.
¹² These fragments of the *sūtra* have been restored from what appear to be quotations in the solution.

¹³ There seems to be some confusion about this example. The first line as it stands does not scan, moreover instead of *kṛit rāśi* it should be *yō rāśi*. The second half-

| | | | | |
|----|-----|---|-----|-----|
| 10 | 163 | 1 | pha | 163 |
| 1 | 60 | 1 | | 600 |
| 10 | 163 | 2 | pha | 163 |
| 1 | 60 | 1 | | 300 |
| 10 | 163 | 3 | pha | 163 |
| 1 | 60 | 1 | | 200 |
| 10 | 163 | 4 | pha | 163 |
| 1 | 60 | 1 | | 150 |

Udā ||

..... |
 śrupusva m. ||

Kramiṇa dvaya māśbādi uttarē (kabhinatām |
 Suvarṇam mē tu sammiśrya katthyatām
 gaṇakōttama ||

sthāpanam $\left\{ \begin{smallmatrix} 4+ & 5+ & 6+ & 7+ & 8+ & 9+ & 1+ & 2+ & 3+ \\ 5 & 6 & 7 & 8 & 9 & 10 & 2 & 3 & 4 \end{smallmatrix} \right\}$ |

kṣhayam saṃguṇya jātam 20 | 30 | 42 | 56 |

72 | 90 | 2 | 6 | 12 | śhām yuti 330 kanakādām

yuti 45 | anēna bhaktvā labdham $\left\{ \begin{smallmatrix} 330 \\ 45 \end{smallmatrix} \right\}$ | pañcha-

daśabhāg-ś-ebhēda kṛiyat¹³ | phalam $\left\{ \begin{smallmatrix} 7 & 6 & 1 \\ 1 & 1 & 1 \end{smallmatrix} \right\}$ |

śha ekaikamāśakakṣhayam | pratyaya trairā-
 śikēna $\left\{ \begin{smallmatrix} 15 & 330 & 1 \\ 1 & 1 & 1 \end{smallmatrix} \right\}$ | phalam $\left\{ \begin{smallmatrix} 22 \\ 3 \end{smallmatrix} \right\}$ | evam sarv-

śhām pratyayō kartavya ||

Saptaviṃśatīmasūtram 27 || + ||

50th Sūtra.

Yutahīnam cha-m-ekatvam |
 hīnē yutīm cha kartavyā¹³ ||

Udā ||

Kō rāśi pañchayutā mūladah sâ rāsis saptā-
 hīna mūlada |

Kō sō rāśir iti prashṭah¹⁴ ||

$\left\{ \begin{smallmatrix} 1 & 5 \\ 1 & 1 \end{smallmatrix} \right\}$ yu mū $\left\{ \begin{smallmatrix} 1 & 7+ \\ 1 & 1 \end{smallmatrix} \right\}$ sâ $\left\{ \begin{smallmatrix} 1 & 7+ \\ 1 & 1 \end{smallmatrix} \right\}$ mū $\left\{ \begin{smallmatrix} 1 & 7+ \\ 1 & 1 \end{smallmatrix} \right\}$ karaṇam |

yutahīnam cha-m-ekatvam 12 | tadālam |

dvihīnam $\left\{ \begin{smallmatrix} 4 & 2 \\ 1 & 1 \end{smallmatrix} \right\}$ dalām $\left\{ \begin{smallmatrix} 2 & 4 \\ 1 & 1 \end{smallmatrix} \right\}$ vargam $\left\{ \begin{smallmatrix} 4 & 1 \\ 1 & 1 \end{smallmatrix} \right\}$ hīn-

yutīm cha kartavyā | hīnām 7⁺ anēna yuti

11 | śha sâ rāśi || aṣya pratyāyanam kṛiyat¹⁵

$\left\{ \begin{smallmatrix} 11 & 5 & 4 & 11 & 7+ \\ 1 & 1 & 1 & 1 & 1 \end{smallmatrix} \right\}$ yu 1 mū $\left\{ \begin{smallmatrix} 4 & 11 & 7+ \\ 1 & 1 & 1 \end{smallmatrix} \right\}$ mū $\left\{ \begin{smallmatrix} 2 \\ 1 \end{smallmatrix} \right\}$ | Pañchāśa-

masūtram || +

line does scan; but the words *iti prashṭah* seem out of place as a portion of the verse. Now if we omit *iti prashṭah* from the verse, the remainder, with a few slight alterations, reads as a correct verse of one line and a half, though in utter disregard of all *śloka*, &c.

Th.
 Yo rāśi pañchayuta mūladah sâ rāsi saptahīna
 na mūlada ko sō rāsi iti prashṭah
 Perhaps that disregard accounts for the confusion made by the scribe of the MS.

51st Sūtra.

Gavām viśeṣha kartavyam dhanam chaiva
puna . . .

. ||

53rd Sūtra.

Ahadrayaharāṣau ta¹⁵) tadviśeṣam vibhāja-
yēt |

Yallabdham dviguṇam kalam dattā sama-
dhanā prati ||

Udā ||

Tridinē ārjayē pañcha bhṛitakô-m-ekapañdi-
tah |

Dvitiyam pañchadivasē rasam ārjayatē
budhah ||

Prathamena dvitīyasya sapta dattāni . . tah |

Datvā samadhanā jātā kena kâl-na katth-
yatām ||

$\frac{5}{3}$ rū $\frac{6}{5}$ rū || karaṇam | ahadrayaviśeṣam

harāṁsau tat tadviśeṣam

anēna kâlēna samadhanā bhavanti || pratyaya
trairāśikē kriyatē $\frac{3}{1} \frac{5}{1} \frac{30}{1}$ | pha 50 | pratha-
mē dvitīyasya- $\frac{5}{1} \frac{6}{1} \frac{30}{1}$ | pha 36 | s-sapta
dattā | 7 śeṣam 43 ||

43 | 43 etē samadhanā jātā ||

Udā ||

Rājapatrô dvayô kēchi nṛipati-s-sēvyā santi
vai ||

M-ākāsyāhnē dvaya-sh-shadbhāgā¹⁶) dvitīya-
sya divarddhakam ||

Prathamēna dvitīyasya daśa dīnāra dattavān |

Kēna kâlēna samatām gaṇayitvā vadāsu mē ||

$\frac{13}{6} \frac{3}{2}$ || dattam $\frac{10}{1}$ || karaṇam || ahadraya-
viśeṣam cha | tatra

.

. pratyayam trairāśikēna

$\frac{1}{1} \frac{13}{6} \frac{30}{1}$ | pha 65 | prathamēna dvitīyasya 10
 $\frac{1}{1} \frac{3}{2} \frac{30}{1}$ | pha 45 | dattā jātā | 55 | 55 ||
samadhanā jātā || Sūtram

tripañchāsamah sūtram 53 || + ||

Sūtra.

Udā ||

¹⁵ Read 'harāṁsau tat.

. dviguṇam dvitīyasya prathamā ||
Prathamā chaturguṇam chaiva chaturthā
chaiva dattavān |

Cha śatam ekam dvayā-
nugam ||

Vadasva prathamē dattam kim pramāṇam
. sya cha ||

$\frac{1}{1} \frac{2}{1} \frac{3}{1} \frac{4}{1}$ || dṛishya $\frac{200}{1}$ || śūnyam ekayutam

kṛitvā 1 | 2 | 3 | 4 | praksh. payuktyā phalam
|| 20 | 40 | 60 | 80 | ēvam 200 || ēsha pratyaya

$\frac{20}{1}$ || $\frac{20}{1}$ || pa $\frac{4}{1}$ || rūpōnakaraṇēna phalam

200 ||

Sūtra.

Yadricchhā pinyasē śūnyē tadā vargam tu
kārayēt |

. ||

Udā ||

.

Tadā cha triguṇam dattam ||

. prathamasya tu kim bhavēt ||

$\frac{1}{1}$ || tadā $\frac{2}{1}$ || tadā $\frac{3}{1}$ || tadā $\frac{4}{1}$ || dattam $\frac{132}{1}$ ||

karaṇam | yadricchhā vinyasē śūnyē | tatri-
chchhā || 1 || tadā vargam tu kārayēt

$\frac{1}{1} \frac{2}{1} \frac{2}{1} \frac{6}{1} \frac{4}{1}$ | prakshipē guṇitam || 1 | 2

6 | 24 | prakshiptam 33 || dṛishyam vibhajēt

$\frac{132}{33}$ vartyam jātām $\frac{4}{1}$ || ēsha prathamēna

dattam || atô nyāsaḥ || 4 | 8 | 24 | 96 | dattam

132 ēsha vargakramagaṇitam || atha yutivar-
gam dva-trimśadlīkaśatam ||

Kāmikam śūnyavinyastam tadā chaiva kramē
gunam |

. ||

Udā ||

.

. kṛitvā chaturtha

. prathamasya kim bhavēt ||

sthāpanam $\frac{1}{1} \frac{2}{1} \frac{3}{1} \frac{12}{1} \frac{4}{1}$ || dṛi 300 || kāmī-

kam śūnyapinyastam kāmikam 1 || ēsha nyas-
tam prathamārāṣau | tadā chaiva kramēna

guṇitam | 1 | 2 | 9 | 48 | ēśam yuti prakshē-
pam $\frac{60}{1}$ | anēna dṛishyam bhājitam $\frac{1}{60} \frac{300}{1}$ |

jātā | 5 | ēsha prathamasya dhanam || anēna

¹⁶ Read 'ākāsyāhnē dvaya-shadbhāgā'. The error appears to have been noticed by the scribe of the manuscript.

kshêpaṁ guṇayê | 5 | 10 | 45 | 240 | *evam* 300
 ésha yutivargaganitaṁ ||
 Udā ||

Prathamasya na *jānāmi* katham dattam cha
 vai dhanam |
 Sa cha dvyardhayutam dattam
 ||

Udā ||

. |
 dattam chaiva chatur-
 guṇam ||
 śatam chatuśchatvālimśādhi-
 kam |

Kim prathamasya dhana ||

• $\frac{1}{1}$ $\frac{2}{2}$ $\frac{3}{1}$ $\frac{3}{2}$ $\frac{4}{1}$ $\frac{4}{2}$ $\frac{144}{2}$ || *drī* $\frac{1}{2}$ sū-

nyêsu $\frac{1}{1}$ $\frac{1}{2}$ yutam chaiva guṇam tatah | yu-
 tam chaiva guṇam kṛitvâ kârayê gapakraman
 tu $\frac{5}{2}$ guṇam | uparê uparam adhê adham gu-
 ṇayê $\frac{10}{2}$ sârdhadvayayutam $\frac{15}{2}$ tritīyarâśyâ
 guṇanam | sârdhais saptabhi trīṇ $\frac{45}{2}$ sârdha-
 trayayutam $\frac{53}{2}$ chaturtharâśi guṇayê-sh-
 shadvimśatibhi | jâtâ $\frac{203}{2}$ sârdhachatvâriyu-
 tam $\frac{217}{2}$ prakshêpayuti $\frac{289}{2}$ *evam* drīśyam |
 sarvam tadêva jâtam ||

Udā ||

. |
 trīguṇam trīsârdhayu-
 tam ||

Chaturguṇam chaturthêna navârdhayutam
 dattam¹⁷ |

. *deśatâ* dvāvimśadhikâ ||
 Kim atra prathamasya dattâsīt ?

• $\frac{3}{1}$ $\frac{2}{2}$ $\frac{5}{1}$ $\frac{3}{2}$ $\frac{7}{1}$ $\frac{4}{2}$ $\frac{9}{1}$ $\frac{2}{2}$ || *ekatram* dattam 222 |

sūnyâ sthânê rūpaṁ datvâ || 1 || yutaguṇita
 yutakramêṇa jâtam || sthâpanam $\frac{5}{2}$ $\frac{15}{2}$ $\frac{67}{2}$
 $\frac{357}{2}$ | drīśya 222 | prakshêpêna jâtam 222 ||
 dattah drīśyâh 222 || jâtam ||

Udā ||

Prathamam¹⁸ na jānāmi divardhayutam . . . |

. . . nam pañchâśayutam prathama . . .
 . . . ||

karapaṁ || sūnyê rūpaṁ datvâ : yutam jâtam
 $\frac{5}{2}$ | prathamâ dviguṇam pañchârdharahitam |
śêsham $\frac{5}{2}$ | prathamâ tritīyam trīguṇam *saptâr-*
dharahitam | *śêsham* $\frac{8}{2}$ | prathamâ chaturtham
 chaturguṇam navârdharahitam | *śêsham* $\frac{11}{2}$ |
êsha nyâsaḥ $\frac{5}{2}$ $\frac{5}{2}$ $\frac{8}{2}$ $\frac{11}{2}$ | *drī* $\frac{29}{2}$ | pra-
 kshêpayuktiḥ $\frac{29}{2}$ | vibhaktaṁ $\frac{2}{29}$ $\frac{29}{2}$ | jâtam
 | 1 | *anêna* guṇitam tadêva | *evam* rīnarâśi
 bhavanti | trīprakâram samâptam || Sūnya-
 sthânê rūpaṁ datvâ | tadanuyuktaḥ | guṇita . .

TRANSLATION.

18th Sūtra.

Twice the difference of the two initial terms, divided by the difference of the (two) increments, and further augmented by one, shall be the time that determines the progression.

First Example.

A person has an initial (speed) of two and an increment of three, another has an increment of two and an initial (speed) of three. Let it now be determined in what time the two persons will meet in their journey.

The statement is as follows :

No. 1, init. term 2, increment 3, period *x*

No. 2, „ „ 3, „ 2, „ *x*

Solution :—“ the difference of the two initial terms” (2 and 3 is 1; the difference of the two increments 3 and 2 is 1; twice the difference of the initial terms 1 is 2, and this, divided by the difference of the increments 1, is $\frac{2}{1}$, and augmented by 1, is $\frac{3}{1}$; this is the period. In this time [3] they meet in their journey which is 15).

Second Example.

(The problem in words is wanting; it would be something to this effect :—A earns 5 on the first and 6 more on every following day; B earns 10 on the first and 3 more on every following day; when will both have earned an equal amount ?)

¹⁷ This line is short by one syllable, and otherwise not regular in scanning. The final question appears to be in prose.

¹⁸ Read *prathamasya metri causâ*, as in one of the preceding examples.

Statement :—

No. 1, init. term 5, increment 6, period x , possession x .

No. 2, init. term 10, increment 3, period x , possession x .

Solution :—"Twice the difference of the two initial terms," etc.; the initial terms are 5 and 10, their difference is 5. "By the difference of the (two) increments;" the increments are 6 and 3; their difference is 3. The difference of the initial terms 5, being doubled, is 10, and divided by the difference of the increments 3, is $\frac{10}{3}$, and augmented by one, is $\frac{13}{3}$. This (*i. e.* $\frac{13}{3}$ or $4\frac{1}{3}$) is the period; in that time the two persons become possessed of the same amount of wealth.

Proof:—by the *rûpôna* method the sum of either progression is found to be 65 (*i. e.* each of the two persons earns 65 in $4\frac{1}{3}$ days).

27th Sûtra.

Now I shall discuss the wastage (in the working) of gold, the rule about which is as follows :—

Having multiplied severally the parts of gold with the wastage, let the total wastage be divided by the sum of the parts of gold. The result is the wastage of each part (of the whole mass) of gold.

First Example.

Suvarṇas numbering respectively one, two, three, four, are subject to a wastage of māshakas numbering respectively one, two, three, four. Irrespective of such wastage they suffer an equal distribution of wastage. (What is the latter ?)

The statement is as follows :—

Wastage — 1, — 2, — 3, — 4 māshaka.

Gold 1, 2, 3, 4 suvarṇa.

Solution :—"Having multiplied severally the parts of gold with the wastage," etc.: by multiplying with the wastage, the products 1, 4, 9, 16 are obtained; "let the total wastage," its sum is 30; the sum of the parts of gold is 10; dividing with it, we obtain 3. (This is the wastage of each part, or the average wastage, of the whole mass of gold.)

(Proof by the rule of three is the following):—as the sum of gold 10 is to the total wastage of 30 māshakas, so the sum of gold 4 is to the wastage of 12 māshakas, etc.

Second Example.

There are suvarṇas numbering one, two three, four. There are thrown out the following māshakas; one-half, one-third, one-fourth, one-fifth. What is the (average) wastage (in the whole mass of gold) ?

Statement :—

quantities of gold, 1, 2, 3, 4 suvarṇa.

wastage $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}$ māshaka.

Solution :—"Having multiplied severally the parts of gold with the wastage," the products may thus be stated,— $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}$. "Let the total wastage be divided;" the division being directed to be made, the total wastage is $\frac{163}{60}$; dividing "by the sum of the parts of gold;" here the sum of the parts of gold is 10: being divided by this, the result is $\frac{163}{600}$. This is the wastage of each part of the whole mass of gold.

Proof may be made by the rule of three :—as the sum of the parts of gold 10 is to the total wastage of $\frac{163}{60}$ māshaka, so the sum of gold 4 is to the wastage of $\frac{163}{150}$ māshaka, etc.

Third Example.

(The problem in words is only partially preserved, but from its statement in figures and the subsequent explanation, its purport may be thus restored):—

Of gold māshakas numbering respectively five, six, seven, eight, nine, ten, quantities numbering respectively four, five, six, seven, eight, nine, are wasted. Of another metal numbering in order two māshakas, etc. (*i. e.* two, three, four) also quantities numbering in order one, etc. (*i. e.* one, two, three), are wasted. Mixing the gold with the alloy, O best of arithmeticians! tell me (what is the average wastage of the whole mass of mixed gold) ?

Statement :—

wastage :— 4,—5,—6,—7,—8,—9;—1,—2,—3.
gold : 5, 6, 7, 8, 9, 10; 2, 3, 4.

(Solution):—"Having multiplied severally the parts of gold with the wastage," the products are 20, 30, 42, 56, 72, 90, 2, 6, 12; their sum is 330; the sum of the parts of gold is 45: dividing by this we obtain $\frac{330}{45}$; this is reduced by 15 (*i. e.* $\frac{22}{3}$); the result is 7 leaving $\frac{1}{3}$ (*i. e.* $7\frac{1}{3}$); that is the wastage of each māshaka (of mixed gold).

Proof :—by the rule of three :—as the total

gold 45 is to the total wastage 330, so 1 māshaka of gold is to $\frac{22}{3}$ parts of wastage. In the same way the proof of all (the other) items is to be made (i. e. $45 : 330 = 5 : \frac{110}{3}$; $45 : 330 = 6 : 44$; $45 : 330 = 7 : \frac{154}{3}$; $45 : 330 = 8 : \frac{176}{3}$; $45 : 330 = 9 : 66$; $45 : 330 = 10 : \frac{220}{3}$).

50th Sūtra.

(The *sūtra* is lost, but can be partially restored from the solution, and may be thus translated:—"The sum of the additive and subtractive numbers is divided by an assumed number; the quotient, lessened by the same number and halved, is squared and added to the subtractive number.")

Example.

Which number added to five is a square, that (same) number lessened by seven is a square. Which number is that? This is the question.

Statement:— $x + 5 = x^2$, and $x - 7 = x^2$.

Solution:—"The sum of the additive and subtractive numbers" is 12; the half of it is 6; lessened by two is 4; its half is 2; its square is 4. "And is added to the subtractive number;" the subtractive number is 7; added to it, it becomes 11 (i. e. $4 + 7$). This is that (required) number.

Its proof is this: $11 + 5 =$ square of 4 (i. e. 16); and $11 - 7 =$ square of 2 (i. e. 4).

(The next *sūtra* is only a fragment, and I omit it).

53rd Sūtra.

(Having found) the two fractions (indicative) of the daily earnings, divide by their difference what is given towards (producing) equal possessions. The quotient, being doubled, is the time (in which their possessions become equal).¹⁹

First Example.

Let one hired Paṇḍit earn five in three days; another learned man earns six in five days. The first gives seven to the second from his earnings. Say, in what time, after having given it, their possessions become equal?

Statement:—No. I, $\frac{5}{3} =$ earnings of 1 day; No. II, $\frac{6}{5} =$ earnings of 1 day; gift 7.

Solution:—"The difference of the daily earnings; the two fractions; their difference;" (here the daily earnings are $\frac{5}{3}$ and $\frac{6}{5}$; their difference is $\frac{7}{15}$; the gift is 7; divided by the difference of the daily earnings $\frac{7}{15}$, the result is 15; being doubled, it is 30; this is the time), in which their possessions become equal.

Proof may be made by the rule of three:— $3 : 5 = 30 : 50$, and $5 : 6 = 30 : 36$; "the first gives seven to the second" 7, remainder 43; hence 43 and 43 are their equal possessions.

Second Example.

Two Rājapûts are the servants of a king. The wages of one (of them) per day are two and one-sixth, of the other one and one-half. The first gives to the second ten *dināras*. Calculate and tell me quickly, in what time there will be equality (in their possessions)?

Statement:—daily wages $\frac{13}{6}$ and $\frac{3}{2}$; gift 10.

Solution:—"and difference of the daily earnings;" here (the daily earnings are $\frac{13}{6}$ and $\frac{3}{2}$; their difference is $\frac{5}{6}$; the gift is 10; divided by the difference of the daily earnings $\frac{5}{6}$, the result is 15; being doubled, it is 30. This is the time, in which their possessions become equal).

Proof by the rule of three:— $1 : \frac{13}{6} = 30 : 65$; and $1 : \frac{3}{2} = 30 : 45$. The first gives 10 to the second; hence 55 and 55 are their equal possessions.

(The following examples form a connected set. The *sūtras* to which they belong are very imperfectly preserved, nor is there any indication left, how they were numbered. The examples also exist in a too fragmentary state to allow of any translation: but it is possible to restore their purport from what is left of the solution.

The *sūtra* belonging to the following example is lost. The example itself may be reconstructed thus:—)

The second gives twice as much as the first, the third three times as much as the first, the fourth four times as much as the first. The total gift of the four persons is two hundred.

¹⁹ The above is undoubtedly the meaning of the rule, though the exact construction of the text is not quite clear to me. Literally the words appear to be "The two fractions of the daily earnings cause their difference

to divide, so that (*tat-yat*) the quotient, being doubled, is the time, that which is given towards equal possessions." *Tadvisesham* and *datā* are the two accusatives governed by the causal verb *vibhājayēt*.

Tell me now, how much was given by the first, and what is the amount of each gift.

Statement:—A gives x , B 2, C 3, D 4. Total 200.

Solution:—Having filled up the empty place (or x) with one, (we obtain) 1, 2, 3, 4 (as the several rates); by the application of the sum of the rates we obtain 20, 40, 60, 80, and thence the total 200.

This is the statement of the proof:—

Init. term 20, increment 20, period 4.

By the *rûpôna* method the total is found to be 200.

Sûtra.

(Only the first portion of this *sûtra* is preserved; viz. “put into the empty place the number 1 representing the desired quantity, and then make up the series of items.” The purport of this rule will be understood from the following examples).

First Example.

(Its purport is:—B gives 2 times as much as A, C gives 3 times as much as B, D gives 4 times as much as C. Their total gift is 132. What is the gift of A ?)

Statement:—A gives x , B 2, C 3, D 4. Total 132.

Solution:—“Put 1 in the place of x ; then form the series of items” 1, 2, 3×2 , 4×6 , multiplying these several rates, 1, 2, 6, 24, their total is 33; with it divide the given total, thus $\frac{132}{33}$; the resulting item is 4, and this is the gift of A. Hence the series of gifts is as follows:—4, 8, 24, 96, and the total gift is 132. This is calculated from the series of items, and hence the total of the items is one hundred and thirty-two.

(Here follows what appears to be intended as a modification of the same *sûtra*, since it is not specialised as a separate *sûtra*. What remains of it, runs thus:—“the number 1 is put into the empty place, and then (the items) are successively multiplied.” The purport of the rule will be again understood from the example.)

Second Example.

(Its purport is:—B possesses 2 times as much as A; C has 3 times as much as A and B together; D has 4 times as much as A, B and C together. Their total possessions are 300. What is the possession of A ?)

Statement:—A has x , B 2, C 3×3 , D 4×12 . Total 300.

Solution:—“the desired quantity is put in the empty place;” the desired quantity is 1; this is placed as the first number; then the successive multiplications are made, 1, 2, 9, 48. Their addition gives the sum of the rates 60; with this the given total is divided, thus $\frac{300}{60}$; the result is 5, and this is the possession of A. With this by multiplication the several rates are obtained, thus 5, 10, 45, 240. Thence the total of the items is calculated to be 300.

(Next follows the fragment of a third example which I omit. After this must have followed a third modification of the same *sûtra*, which is lost; but the first portion of it, as quoted in the examples, must have run thus:—

Śūnyasthānē rūpam datvā, yutam chaiva gupam tataḥ 1

i.e., “having put the number one in the empty place, the (needful) additions and multiplications are then made.”)

Fourth Example.

(Its purport is:—A possesses something and $1\frac{1}{2}$ in addition; B has 2 times as much as A and $2\frac{1}{2}$ in addition; C has 3 times as much as B and $3\frac{1}{2}$ in addition; D has 4 times as much as C and $4\frac{1}{2}$ in addition. Their total possessions are one hundred and forty-four and one half. What is the possession of A ?)

Statement:—A has $x + 1\frac{1}{2}$, B $2 + 2\frac{1}{2}$, C $3 + 3\frac{1}{2}$, D $4 + 4\frac{1}{2}$. Total $144\frac{1}{2}$.

Solution:—“Having put one in the empty place,” thus $1 + 1\frac{1}{2}$: “the several additions and multiplications are then made:” in making the additions and multiplications, let the proper order of calculation be observed, (hence by addition) $\frac{5}{2}$; next comes multiplication; (here) multiply numerator with numerator and denominator with denominator, $\frac{10}{2}$ (i.e. $\frac{2}{1} \times \frac{5}{2}$); two and one half are now added, thus $\frac{15}{2}$; now comes the multiplication with the third number, or three (is multiplied) with seven and one half (i.e. $\frac{15}{2} = 7\frac{1}{2}$), thus $\frac{45}{2}$; three and one half are now added, thus $\frac{52}{2}$; now multiply the number four with twenty-six (i.e. $\frac{52}{2} = 26$); the result is $\frac{208}{2}$; four and one half are now added, thus $\frac{217}{2}$. The total of these rates is $\frac{259}{2}$ which is the given total of the possessions. All the rest remains the same; (i.e. dividing the given

total $\frac{289}{2}$ by the sum of the rates $\frac{289}{2}$ we obtain 1 as the value of x , hence the possessions of A, B, C, D are respectively $\frac{5}{2}$, $\frac{15}{2}$, $\frac{52}{2}$ and $\frac{217}{2}$, the same as the rates mentioned above).

Fifth Example.

(Its purport is:—A gives $\frac{3}{2}$ plus a certain amount; B gives $\frac{5}{2}$ plus 2 times as much as A; C gives $\frac{7}{2}$ plus 3 times as much as A and B; D gives $\frac{9}{2}$ plus 4 times as much as A, B and C. The total of their gifts is 222. What was the gift of A ?).

Statement:—A gives $x + \frac{3}{2}$, B $2 + \frac{5}{2}$, C $3 + \frac{7}{2}$, D $4 + \frac{9}{2}$; the joint gift is 222.

Solution:—“Having put the number one in the empty place,” 1 (for x), the additions and multiplications are made in their proper order. The result is the following series of rates: $\frac{5}{2}$, $\frac{15}{2}$, $\frac{67}{2}$, $\frac{37}{2}$; the given total is 222. The addition of the rates yields 222, which is the same as the given total 222. This practically finishes the solution.

(Next follows the fragment of the sixth example, which I again omit).

Seventh Example.

(Its purport is:—A has $1\frac{1}{2}$ plus a certain amount; B has $2\frac{1}{2}$ less than 2 times A; C has $3\frac{1}{2}$ less than 3 times A; D has $4\frac{1}{2}$ less than 4 times A. Their total possessions are $\frac{29}{2}$. What is the possession of A ?)

(The statement is wanting).

Solution:—“Having put the number one in the empty place,” the addition is made $\frac{5}{2}$; twice the rate of A less five halves is $\frac{5}{2}$; three times the rate of A, less seven halves, is $\frac{3}{2}$; four times the rate of A, less nine halves, is $\frac{11}{2}$. The series of these rates is as follows: $\frac{5}{2}$, $\frac{5}{2}$, $\frac{3}{2}$, $\frac{11}{2}$. The given total is $\frac{29}{2}$. The sum of the rates is $\frac{29}{2}$. Dividing the one by the other, $\frac{29}{2} \div \frac{29}{2}$ we obtain 1. Multiplying by this, the same amount is obtained (as the gift of A; viz. $\frac{5}{2}$). The same is the case with the negative quantities, (i.e. B $1 \times [(2 \times \frac{5}{2}) - \frac{5}{2}] = \frac{5}{2}$; similarly C $\frac{3}{2}$, D $\frac{11}{2}$).

NOTES.

1. In the text, the italicised words are conjecturally restored portions. The dots signify the syllables (*akṣara*) which are wanting in

the manuscript, the number of the dots corresponding to the number of missing syllables. The serpentine lines indicate the fact of lines being lost at the top and bottom of the leaves of the manuscript. In the translation the bracketed portions supply lost portions of the manuscript. The latter can, to a great extent, be restored by a comparison of the several examples. Occasionally words are added in brackets to facilitate the understanding of the passage.

2. **Sūtra 18.** Problems on progression. Two persons advance from the same point. At starting B has the advantage over A; but afterwards A advances at a quicker rate than B. Question:—when will they have made an equal distance? In other words, that period of the two progressions is to be found where their sums coincide. The first example is taken from the case of two persons travelling. B makes 3 miles on the first day against 2 miles of A; but A makes 3 miles more on each succeeding day against B's 2 miles. The result is that at the end of the third day they meet, after each has travelled 15 miles. For A travels $2 + (2 + 3) + (2 + 3 + 3) = 15$ miles, and B $3 + (3 + 2) + (3 + 2 + 2) = 15$ miles. The second example is taken from the case of two traders. At starting B has the advantage of possessing 10 *dināras* against the 5 of A; but in the sequel A gains 6 *dināras* more on each day against the 3 of B. The result is that after $4\frac{1}{2}$ days, they possess an equal amount of *dināras*, viz. 65.

3. **Sūtra 27.** Problems on averages (*samabhāgatā*). Certain quantities of gold suffer loss at different rates. Question:—what is the average loss of the whole? The first problem is very concisely expressed; the question is understood; some words, like *kuṭā gatā*, must be supplied to *samabhāgatām*. The reading *rahitā*, however, is not certain.

4. Brahmagupta's version of the **forty-ninth sūtra**, referred to above. (MS., No. I, B, 6. Library, As. Soc. Beng., p. 85) is as follows:—

Idānīm |

Yô rāsir ishtônô vargô bhavati, sô ch'anyê-shtayutô varga eva bhavati ||

Tat-karṇa-sūtram |

Yair ūnô yais cha yutô rūpair Vargas tad-akṣyam ishta-hṛitam |

Ishṭonam tad-dala-kṛitir ūnabhyadhikā bhavati rāsīḥ ||

The *karāṇa-sūtra* is translated by Colebrooke (*Indian Algebra*, p. 371) thus:—"the sum of the numbers, the addition and subtraction of which makes the quantity a square, being divided by an arbitrarily assumed number (*ishān*), has that assumed number taken from the quotient: the square of half the remainder, with the subtractive number added to it, is the quantity (sought)." The *sūtra* is followed by a commentary and an example, which differs entirely from that given in the Bakhshālī MS. It will also be noticed, that Brahmagupta's *sūtra* is in the *āryā* measure, while the fragments of the *sūtra* in the Bakhshālī MS., as restored from the solution, are in the *śloka* measure.

5. **Unnumbered sūtras.** Problems on distribution or partition. It may be noted that these examples afford an illustration of what has been before remarked regarding the nature and use of the dot. It will be noticed that the dot • is called *śūnya* or 'the empty place'; and as the first step of the process of solution the direction is given 'to fill up the 'empty place with the number 1,' the latter being arbitrarily assumed to represent the unknown quantity of which the value is sought (the *ishān* or *kāmika*).—The meaning of the example of the first *sūtra* is:—if A gives 1, B gives 2, C 3, D 4, the sum of the rates is 1 + 2 + 3 + 4 = 10; dividing the given total 200 by 10, we obtain 20, as the gift of A. Hence the gifts of B, C, D are 40, 60, 80 respectively. The rule of the *nūpāna* method is not preserved in the Bakhshālī MS. It is given, however, by Brahmagupta in the section of his Arithmetic on Progression. In Colebrooke's translation of Brahmagupta's work it is numbered 17 (on p. 290), and runs

as follows:—"The period less one, multiplied by the common difference, being added to the first term, is the amount of the last. Half the sum of the last and first terms is the mean amount: which multiplied by the period, is the sum of the whole." Applying this rule to the present example we have:—the period 4 less 1 is 3; multiplied by the increment 20, it is 60; added to the initial term 20, it is 80. The sum of 80 and 20 is 100; half that sum is 50; and this multiplied by the period 4, yields the total 200. In the original Sanskrit (MS., No. I, B, 6. Library, As. Soc. Beng., p. 86) of Brahmagupta, the rule runs thus:—

Padām ekahīnam uttaragūṇitam saṃyuktam
ādināntyadhaṇam |

Ādityutantyadhaṇārdham madhyadhaṇam pa-
dagūṇitam phalam ||

It will be noticed that this is in the *āryā* measure, and that it is quite differently worded from the same rule in the Bakhshālī MS., which commences with the word *nūpāna*, and which must have been in the *śloka* measure. This confirms a remark previously made regarding the relation of the Bakhshālī MS. to Brahmagupta.—In the fifth example of the second *sūtra* the rates are obtained thus: A gives $1 + \frac{3}{2} = \frac{5}{2}$; B $2 \times \frac{5}{2} + \frac{5}{2} = \frac{15}{2}$; C $3 \times (\frac{5}{2} + \frac{15}{2}) + \frac{7}{2} = \frac{67}{2}$; D $4(\frac{5}{2} + \frac{15}{2} + \frac{67}{2}) + \frac{9}{2} = \frac{317}{2}$. The sum of the rates is 222; dividing with this the given total 222, we obtain 1 as the value of *x*; which practically finishes the problem: for multiplying each rate with 1, we obtain the same amounts $\frac{5}{2}, \frac{15}{2}, \frac{67}{2}, \frac{317}{2}$ for the several gifts of A, B, C and D.

6. The page figured on the accompanying plate reads as follows:—

1. . . . udā | a]ṭāta-rambhalōhasya tṛi-chatuh-pāṇchakā kshayê | sapta =
2. viṃśati piṇḍasya tṛidhānta-śēshya dṛiṣhyatê | kīm sarvaṃ vada tatvajña kshayaṃ cha
3. ma katthyatām $\frac{1}{3} \frac{1}{4} \frac{1}{5}$ śē 27 | karāṇam | kṛitva rūpa-kshayaṃ pârtha $\frac{2}{3} \frac{3}{4} \frac{4}{5}$
4. guṇitam jîta $\frac{2}{3}$ | rūpa-kshayaṃ $\frac{3}{5}$ | anēna śēshaṃ bhaktaṃ śēshaṃ | 27 | bha =
5. [ktaṃ] jâtaṃ 45 asya saptāviṃśa pâtya śēshaṃ 18 || êta kshayaṃ || udā |
6. [pa]ṇikṣhîṇasya lōhasya tṛidhāntam pāṇchamāśhakaṃ | na jñāyatê [ta]t-pravṛittika
7. [na] śē sha pradrīṣyatê | pravṛitti-śēshaṃ yô piṇḍam kēvalam viṃśati sthitaṃ | â =
8. darīyatām pravṛitti syā kīm vâ śēshaṃ vadasva mē $\frac{1}{3} \frac{1}{4} \frac{1}{5}$ kṛitvâ rūpa =]

The lithographed plate, unfortunately, is not quite perfect. The transcript has been made from the original. *Ambha-lôha* I take to be the Sanskrit *abhra-rôha* 'lapis lazuli' (cf. Pâli *ambhō* 'a pebble'). For *pañchamâśakaṁ* read *pañchamâśakani*. The purport of the first example is: "of an unknown quantity (*piṇḍa*) of lapis lazuli, on deducting the loss (in cutting), there remain $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$ in three instalments (*tridhâ-anta*); the sum of the remainders of the three instalments is 27. What was the total, and what is the loss?" Solution: "Subtracting from 1 severally $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, we get $\frac{2}{3}$, $\frac{3}{4}$, $\frac{4}{5}$; these multiplied with one another are $\frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} = \frac{2}{5}$; subtracting this from 1, we get $\frac{3}{5}$; the total remainder 27, being divided by this, we get 45; deducting from this the total remainder 27, we

get 18 as the loss." Proof: the total is 45; at the first time of cutting, $\frac{1}{3}$ or 15 is got as cut stones; hence the loss (or what is cut away) is 30; the latter is cut once more, and $\frac{1}{4}$ or $7\frac{1}{2}$ is got as cut stones, the loss being $22\frac{1}{2}$; this is cut a third time, and $\frac{1}{5}$ or $4\frac{1}{2}$ is now got as cut stones, the final loss being 18. The produce of the three instalments of cutting, accordingly, is $15 + 7\frac{1}{2} + 4\frac{1}{2}$ or 27.—The second example is similar; only that here, besides the original (*praprîtti*) total (50), the total produce (*śêsha* or what remains after deducting the several losses) is to be found (30), instead of the final remainder (*praprîtti-śêsha*) which is given as 20. The solution (and proof) may be made exactly as in the case of the first example.

SOMALI AS A WRITTEN LANGUAGE.

No. III.¹

BY CAPTAIN J. S. KING, Bo.S.C.

COLLOQUIAL SENTENCES.

| English | Somali |
|-------------------------------|---|
| 18.—How old are you? | <div> <div>ادگ اتمس جر بنی</div> <div>or</div> <div>ادگ امساد جر بنی</div> </div> |
| 19.—Will you sell this? | ادگ وه ما ابندیس |
| 20.—Yes: I will sell it. | ها و ابنی |
| 21.—Will you buy this? | ادگ وه ما ابندیس |
| 22.—I will buy it. | و ابنی |
| 23.—I shall beat you. | انگ و کگ دفن |
| 24.—Hold my horse. | فرسکینگى قبو |
| 25.—I will hold it. | و قبنی |
| 26.—What have you brought? | مهاد کینتی |
| 27.—Bring me a good spear. | ورن وناقسن ایکین |
| 28.—I want a mat. | دیرمان دونی |
| 29.—Do you know what he says? | و و لیلهی متقن |

| | |
|--|--------------------------|
| 30.—Is this knife yours? | مندید متادیب |
| 31.—Yes: this is mine. | ها وه ابالیه |
| 32.—Is much coffee produced in your country? | مغالداد بن بدن علیدهی |
| 33.—What is the charge for a camel-load? | اورک قاد کیسی و اتمس |
| 34.—Is any fresh water procurable here? | میش بیو معن علیدهی |
| 35.—How far is the town from the shore? | مغالده هیبت اتمس جر بنی |
| 36.—I saw you to-day in the bazar. | مانت سوگکی یان کو ارقی |
| 37.—What were you doing there? | میش مهاد کسمینسی |
| 38.—I was buying some food. | وه هان ارتو ابنی |
| 39.—I shall come to your house to-day. | مانت اغلکاگی یان امنی |
| 40.—I want some bread and salt. | اکیس آیو ارسبوه یان دونی |

¹ Erratum in No. II. Somali. The last sentence in the left-hand column on page 285, Vol. XVI., should be written as follows:—"By this method the student is saved the trouble of wading through grammatical

rules (which, without practice in their use, would probably not convey much information to his mind), and his attention is drawn only to those points of grammar which arise in the sentences."

41.—I wish to buy some *ghi* and rice.

سَبْگِ اِیَوُ بُوِیس اِنُّنْ
اِیْبَسْدِرْیَانِ دَرْنِی

42.—Bring me some milk.

اَنُو اَبْکِیْن

43.—Do you drink milk?

اَدْگِ اَنُو مَدَمَتْ

44.—Yes: I do drink milk.

وِیْیِ اَنْگِ اَبُو وُذَمْ

45.—Do you drink coffee?

اَدْگِ قَهْوَه مَدَمَتْ

46.—No: I drink water.

مَایَه بَیْانِ وَاَبْ

47.—Do you smoke tobacco?

اَدْگِ بُوْرِی مَقَدَتْ

48.—Have you ever been to India?

اَدْگِ وَلِی اَرْضِ الْهِنْدِی
مَدَمَتْنِی

49.—What pay do you require?

دَگِ اِتَمَسْ مَشْأَرَه
دُونَسْ
OR
بَشِی مَهَادِ دُونَسْ

50.—I will give you ten dollars a month.

اَنْگِ تَوْنِ قَوْشِی مَشْأَرَه
کُوسِیْنِی

Vocabulary and Grammatical Analysis, with Notes and transliteration.

18. **Adiga immisa jir ba tāhai?** or, **Adiga imsād jirtai?** *Immisa* or *msa*, how much? adv. of quantity. (H. p. 40.) *jir*, v. of existence. *Imsād*, vide sentence 7.

19. **Adiga wahā mā ibinaisa?** *Wahā*, this: compounded of *wah*, some, and the def. art. *Ibinaisa*, 2nd pers. sing. pres. of *ibī*, v. 3. sell.

20. **Hā: wā ibinaiya.**—*Hā*, interj., yes, just so!

21. **Adiga wahā mā ibsanaisa.**—*Ibsanaisa*, 2nd pers. sing. pres. of *ibso*, v. 8. buy. [Note the difference between *ibī*, v. 3. sell, and *ibso*, v. 8. buy.]

22. **Wā: ibsanaiya**

23. **Aniga wā ku gu—dufan.** *Ku*, pers. pron. 2. dative. *Gu=ku*, a prep. used with the verb *difo*. *Difo*, v. 4, always preceded by *ku*, when meaning to fall upon and beat with something. *N. B.*—*Difo*, without any preposi-

tion, means force, jerk. *So-difo* means force open. and *ka-difo*, take by force.

24. **Faras-kaigi kabo.** *Fa*, s (Ar.) s. m. horse. *Kabo*, v. 4. imperative, hold, catch.

25. **Wa kabanaiya.**—1st pers. sing. present with a future signification.

26. **Mahād kēntai?** *Kēntai*, 2nd pers. sing. perf. of v. *kēn*, bring, fetch.

27. **Waran wanāksan i-kēn.** *Wa an* s. m. spear. *Wanāksan*, adj. good.

28. **Dirmān dōnaiya.**—*Ḍirmo*. s. f., mat: (Vide sentence 9).

29. **Wahū lēhyahai mā taḥan?** *Wahū*, contr. for *wah*, some, and *yū*, he (H. p. 14; *Lēhyahai*, from the adjective root *alēh*, literally meaning 'possessed of,' but here used idiomatically. Probably the word *hadai*, meaning speech, talk, story, conversation, &c., is understood.

30. **Mindida ma tādi ba?** *Mindī*, s. f. knife: *mindida*, the knife; *a*, the def. art. implying that the thing is actually present. The article is here assisted by the consonant *d*, because *mindī* is fem. and ends in a vowel. (H. ss. 21-22). *Tādī*, possess. pron. 2nd pers. fem. (H. s. 55).

31. **Hā! wahā an-alēh.**

32. **Maghālādāda bunn badan mā lēdahai?** *Meghālo*, s. f. country, city. *Dāda*, possess. pron. your. The possessive pronoun follows the same rules as the article in regard to the election of a consonant to complete it. The remarks under *mindīda* (sentence 30), apply also to *maghala-dāda*. *Bunn*, (Arabic) s. m. coffee. *Badan*, adv. of quant., much, past part. of v. *bādī*, increase. *Lēdahai*, from the root *alēh* (vide sentence 29).

33. **Awarka kād kisī wa immisa?** *Awr*, s. m. camel; *awarka*, the camel. *kād*, s. m. burden. *Kisī*, possess. pron. 3rd pers. sing. masc. his (H. s. 55).

34. **Mēsha biyo m'an mā lēdahai?** *Mēl*, s. f. place. *Mēsha* = *mēl*, with the def. art. affixed *l* being changed into *sh* for the sake of euphony. (H. s. 23). The change of these letters has already been noticed in the Introduction. *M'an*, adj., sweet.

35. **Maghālada hēbta immisa jirta?** *Hēb*, s. f. shore; *hēbta*, the shore. (H. s. 23).

36. **Mānta sogkī yān kū arkai.** *Mānta*, adv. to-day = *mān*, day, with the def. art. affixed. *Arkai*, 1st pers. sing. perf. of *arak* or *arag*, v. see.

37. **Mêsha mahâd ka-samainaisai?** *Ka* is here a verbal particle joined to the verb. *Samainaisai*, 2nd pers. sing. imperf. of *sama* v. 5, make, construct, do.

38. **Wah hân ûnnû yân ibsanaiyai.** *Wah*, s. m. some. *Hân*, pers. pron. 1, aided by the letter *h*, because the previous word terminates in that letter. (H. s. 22 and pp. 13-14). *ûnnû*, s. f. food, dinner: derived from. *ûn* v. eat.

39. **Mânta aghalkâgî yân imanaiya.** *Imanaiya*, 1st pers. sing. pres. of *ima* v. 4 irreg., come.

40. **Kîbis iyo ôsbûh yân dônaiya.** *Kîbis* (Ar. *خبز khubz*), s. f. bread. *Iyo*, conjunc., and *ôsbûh*, s. f. sale.

41. **Subag iyo baris inan ibsido yân dônaiya.** *Subag*, s. m. *ghî*, clarified butter. *Baris*, s. m. rice *Inan* = *in*, that, with the 1st pers. pron. added; that I.

42. **Âno i—ken.** *Âno*, s. m. plur. milk.

43. **Adiga âno mâ-damta?** *Damta*, 2nd pers. sing. pres. habitual of *dan*, drink (milk).

44. **Wâ yahai: aniga (or anigo) âno wâ dama.** *Wâ yahai*, it is so; yes.

45. **Adiga kahwa mâ-fûdta.** *Kahwa* (Ar.)

s. m. coffee (the beverage) *Fûd*, v. drink (coffee or smoke tobacco).

46. **Mâya: bi yân wâ aba.** *Mâya*, adv. no. *aba*, 1st pers. sing. pres. habit. of *ab* v. drink (water.) [From this and the preceding sentences, it will be observed that the English verb 'to drink' is expressed in *Somâli* by three different verbs, according to the liquid drunk: and these verbs cannot be used indiscriminately.]

47. **Adiga bûrî mâ-fûdta?** *Bûrî*, s. m. tobacco.

48. **Adiga wâliardhu-l-Hîndî mâ-tagtai?** *Wâli*, s. m. (used as an adverb), ever, hitherto, yet. (H. s. 267). *Arth*, (Ar.) s. country, land, region.

49. **Adiga immisa mushâhara dônaisa?** or **Bishi mahâd dônaisa?** *Mushâhara*, (Ar.) s. m. monthly wages. (from Ar. *shahar*, a month). *Bil*, s. f. month. *Bishi* = *bi*, with the def. art affixed. (Vide sentence 34).

50. **Âniga tôban karshî mushâhara kû sinaiya.** *Tôban*, s. f. num., Ten. *Karsh*, s. (Ar.) a dollar. *Sinaiya*, 1st pers. sing. pres. (with a future signification) of *sî*, v. 3, give.

FOLKLORE IN SALSETTE.

BY GEO FR D'PENHA.

No. 3.—*Rājachā Masthā.*

In a distant land once lived a great *Rājā* who ruled over a vast kingdom. He had large armies at his command. The nobles and chieftains were all at his service, and he had everything that one could desire: but a misfortune marred his happiness, for he had no heir to succeed him after his death. So the *Rājā* on this account was very sad, and gave large alms, and other things in charity in the hope that the receivers thereof would pray to God to give him an heir. At last his long cherished desire was fulfilled in his old age, when a son was born to him. The boy grew up very rapidly and was the joy of all his father's house, and of his subjects as well.

Now it happened that about two years afterwards a daughter was also born to the *Rājā*, on whom everyone bestowed all care and attention, neglecting the prince, who was not so much as even looked upon,—a fact which he at once observed and felt deeply.

For several years matters continued in this state, and the prince, who had by this time

attained the age of discretion, became disgusted. Early in the morning he would rise, take his sword and go out into the jungles, and there ask of the herdsmen (*gaunhlās*) who tended the cows to give him milk, and on this alone he lived. At first he would drink only about a *sch* or so, but by degrees he began consuming it by *mans*. Drinking milk in such quantities made him so strong, that on his way home he would uproot trees and destroy anything, even houses that came in his way. So he became known throughout the State by the name of *Rājachā Masthā*. As soon as he came home he would take to his room and never allow any one to enter. The servants would now and again come and tell him to take his meals, but he would tell them to go about their business. Now the princess often saw him coming home from his daily visits to the *gaunhlās*, but did not know that he was her brother. She also saw how he uprooted trees and did other feats of strength.

When the princess became of a marriageable age, the *Rājā*, her father, asked her to mention

any person that she would like to take for her husband. And as the princess did not know that Rājāchā Masthiā was her brother, she said :

"I will **marry only him**, who is so strong as to be able to take up an iron ball twice twelve *mans* in weight, and throw it at a distance of twice twelve *kōs*."

The Rājā agreed, and accordingly sent notices to various Rājās and *pardhāns*, to the effect that any one, who could lift up an iron ball twice twelve *mans* in weight and throw it to a distance of twice twelve *kōs*, should have his daughter in marriage.

Accordingly on an appointed day, an iron ball twice twelve *mans* in weight was made ready, and a great many Rājās and *pardhāns*, who had received the notice, came to try if they could lift it up and throw it to a distance of twice twelve *kōs*, and so get the beautiful princess.

All that had come tried their strength but in vain. Some of them could lift up the ball, but to throw it such a distance was impossible. They tried over and over again till late in the evening, and all despaired of success. Just then Rājāchā Masthiā was coming home from his usual excursion, and it happened that the iron ball of twice twelve *mans* in weight lay in his way. Not knowing the object of it, and not even paying any attention to all the Rājās and *pardhāns* that were assembled there, with accustomed ease he took up the ball and threw it at a distance of twice twelve *kōs* and even more.

The princess was watching from one of the palace windows, and as soon as she saw Rājāchā Masthiā fulfil the condition she had imposed upon the successful suitor for her hand she at once ran to the Rājā, her father, and told him that Rājāchā Masthiā was her choice. All the strange Rājās and *pardhāns* were astounded at the strength of Rājāchā Masthiā; but at the same time they could not become reconciled to the idea of a sister marrying her brother. Her father and his guests all tried to persuade her of her folly, but she was not to be put off, and she said : "I must either marry him, even if he be my brother, and him alone, or die."

All were at a loss to know what to do. Nothing could dissuade her from the foolish love. However, they saw no alternative, and said they would make this case an exception, and everything was agreed upon and an early

wedding day was fixed upon. Great preparations were made throughout the kingdom to celebrate such a happy occasion with a fitting pomp, and nothing was spared that could lend beauty and grandeur to the ceremony.

As to Rājāchā Masthiā, he was mad with rage when he heard what was going to take place, and he would not agree to it. So a few days before the day appointed for the wedding he took his sword and was sharpening it when one of the Rājā's servants passed him and greeting him said : "Pardhān Sahib, all the palace is in a bustle preparing for a wedding, and yet you seem to be taking it easy !"

"For whose wedding ?" he asked, "are they preparing ?"

The servant replied : "Why, are you so ignorant as that ? It is your own wedding with your sister !"

But Rājāchā Masthiā in an angry tone told him to leave his presence at once, "or," said he, "I will tear you into a thousand pieces."

The poor servant, who knew the temper and strength of Rājāchā Masthiā only too well, left the place without another word.

Soon after this another servant was passing by, and said : "What are you doing, Pardhān Sahib ? Where are you going that you are sharpening your sword, while all the palace is busy preparing for a wedding ?"

"Whose wedding ?" asked Rājāchā Masthiā.

"Why ? can I believe that you are ignorant of it, when the wedding is your own with your sister ?" replied the servant.

But he was also told to leave his presence by Rājāchā Masthiā, who threatened to tear him into a thousand pieces, and dreading his wrath the man went about his business without uttering another word.

While he was yet sharpening his sword, a third servant came up to him and asked what he was doing while all the palace was making grand preparations for the coming great event, namely his wedding with his sister. Rājāchā Masthiā was furious and flew at him sword in hand, telling him to go away, "or," said he, "I will tear you into a thousand pieces." Like the other two servants this servant, too, feared to provoke him further and quietly went away.

Now Rājāchā Masthiā's sword was of such a nature, that if it rusted he would fall sick, and if it broke he would die. His life lay

in the sword, and consequently he could not dispense with it. So taking his sword and his horse, Rājāchā Masthiā left his house, without informing his father or any one else. They all saw him going away, but they thought that he was only going on his daily excursion, and that he would return as was his wont, little suspecting that he was going for good.

So away he rode, through jungles and forests, and had travelled some distance when he met a hunter who was carrying a gun on his shoulder. Rājāchā Masthiā called out to him: "Hallo hunter, what is the weight of your gun?"

"Fifteen *mans*," the hunter replied.

"You must be a very strong man to carry a gun fifteen *mans* in weight, continually on your shoulder!" said Rājāchā Masthiā.

"Oh, no!" replied the hunter. "Rājāchā Masthiā is the only strong man, who lifted an iron ball twice twelve *mans* in weight, and threw it a distance of twelve *k's*."

"I am he," Rājāchā Masthiā replied.

On this the hunter said: "Then I must follow you. I will go with you wherever you go. I will live and die with Rājāchā Masthiā."

Rājāchā Masthiā now pursued his way followed by his new friend, the hunter; Rājāchā Masthiā riding his horse, while the hunter followed on foot. They travelled in this way for a long time when it struck Rājāchā Masthiā that it was unbecoming that he, though a prince, should ride a horse, while his friend, the hunter, walked. So he let his horse loose to go where he liked, and both made their way on foot. When they had travelled for several days they came on a carpenter who was carrying his saw on his shoulder, and other tools in a bag swung on his back. Rājāchā Masthiā called out to him:

"Hallo carpenter! what is the weight of your saw and the other tools?"

The carpenter replied: "The weight of my saw is ten *mans* and that of the other tools is five *mans*, in all fifteen *mans*."

Rājāchā Masthiā said: "Indeed, you are a very strong man, to carry tools fifteen *mans* in weight continually about you."

"Oh no!" said the carpenter. "My strength is nothing compared to that of Rājāchā Masthiā, who lifted up an iron ball twice twelve *mans* in weight, and threw it at a distance of twice twelve *k's*. He is really strong."

Rājāchā Masthiā said: "I am that Rājāchā Masthiā, who lifted that iron ball twice twelve *mans* in weight and threw it at a distance of twice twelve *k's*."

On this the carpenter said: "Well, then, I will go with you wherever you go. Even to death will I follow you."

Now these three, Rājāchā Masthiā, the hunter and the carpenter, all travelled together. After many days they came to a city late in the evening, but they were surprised to find that it was deserted, and not a single soul to be seen. All the houses and shops were open.

Rājāchā Masthiā said: "What can be the cause of this? We will remain here for some days and find out what it all means."

So they put up in a large house. They went to one of the shops, and took what was necessary, laying the proper money on the counter. They then cooked their food, ate it and went to sleep.

Next day Rājāchā Masthiā said to the carpenter: "The hunter and myself are going round the village: you stay at home and prepare the dinner to-day."

The carpenter agreed and set about his work, while Rājāchā Masthiā and the hunter went to inspect the village. In due time the rice was ready and the carpenter poured it out on a *prithrāvel*,¹ when lo! a *rānkhas*, three palmyras in height, made his appearance and asked for the rice or he said he would swallow the carpenter. The poor carpenter was at a loss to know what to do; but seeing that if he did not give up the rice his life was at stake, he gave it up. The *rānkhas* having done justice to the rice disappeared. The carpenter set about cooking rice again, but before it was done Rājāchā Masthiā and the hunter came in and asked if the dinner was ready. The carpenter did not like to incur the displeasure of Rājāchā Masthiā, nor did he wish him to know that a *rānkhas* had come and swallowed the rice he had previously cooked, for fear of being called a coward, and so he made some excuse for the delay in making the dinner ready. All three set about it and when it was prepared they all had their fill and rested.

On the following day Rājāchā Masthiā told the hunter that it was his turn that day to stay at home and prepare dinner, while the carpenter and himself went out. Thus saying they

¹ A plate made of leaves.

both went out, and the hunter having taken what was necessary from the shops, laid the money on the counters, and set about cooking. When the rice was boiled he poured it on a *pathrávél*, when the *ránkhas* made his appearance again and demanded the rice of the hunter. The hunter was a little reluctant at first, but the *ránkhas* said: "Give up the rice at once or I will make a meal of you instead." The hunter was terror-stricken at these words, and without any resistance handed the *pathrávél* with the rice to the *ránkhas*, who ate it and disappeared.

Now the hunter hastened to boil some more rice, but Rājāchā Masthiā and the carpenter came in and asked for dinner. The carpenter who had had his experience the day before, at once conjectured that the hunter must have met with the same fate as he had, and understood the cause of the delay. The hunter, too, guessed that the carpenter must have also had a visit from the *ránkhas* but of course he would not tell Rājāchā Masthiā what had occurred, and made some excuse to account for the delay. All hands were now busy in preparing dinner, and when it was ready they satisfied the cravings of hunger.

When they rose on the third day Rājāchā Masthiā said: "To-day it is my turn to cook. You two go about the village." But the hunter and the carpenter would not allow it. Said they: "It is not becoming that you, a *pardhān*, should cook and give us to eat. We two will make it our duty to cook every alternate day." They said this, not because they really had any feelings of respect towards Rājāchā Masthiā as a *pardhān*, but because they feared that he would come to learn of their encounters with the *ránkhas*, and they would thereby be disgraced. Rājāchā Masthiā, however, was not to be persuaded, but said: "You had your turns and you did your duty. To-day it is my turn, and I must do my duty. I am a *pardhān* it is true, but here I do not insist on my dignity. We are equals."

The hunter and the carpenter saw no alternative but to submit. So they went about the village, fully believing that at their return they would be reprimanded for their cowardly conduct on the previous days. As soon as the hunter and the carpenter were gone Rājāchā Masthiā went to one of the shops, took rice, *ghā*, and

other necessities, put down the proper price on the counter, and set about preparing the dinner.

In a short time the rice was boiled and Rājāchā Masthiā poured it over a *pathrávél*, when lo! the *ránkhas* scenting the fine savour of the dinner came to claim his share.

"Who are you?" asked Rājāchā Masthiā. "and what do you want here?"

The *ránkhas* replied: "Do not trouble yourself as to who I am, give up the rice in an instant, or you are my victim. I will swallow both the rice and you."

But our hero was not to be deterred by such threats. "Wait a few moments," he said, "and I will give you the rice." Saying this he went and fetched his sword, and with one stroke he stretched the *ránkhas* on the ground, where he lay like a great mountain. Having killed him he proceeded to examine this great monster more closely, when his attention was attracted by something very bright at the *ránkhas'* waist. Approaching the body Rājāchā Masthiā took it and found it was a **diamond** of great size. Now near where the *ránkhas* lay dead was a tank. As soon as the diamond was reflected in the tank, behold! there a **passage opened**. Rājāchā Masthiā descended by a ladder that he saw, and he came to a splendid **palace**. Entering it he saw a **damsel** of rare beauty, and chatted with her a long while, and then finding that it was time for the hunter and the carpenter to return for dinner, he left her, though she was very reluctant to let him go. He, however, took good care to take the diamond with him. He came home just a little before the hunter and the carpenter returned, and when they came he pretended that nothing had happened. After they had their dinner, Rājāchā Masthiā asked first the carpenter and next the hunter, to tell him the true cause of the delay in preparing dinner on the previous days. They confessed their faults and begged forgiveness. Rājāchā Masthiā, who was as kind-hearted as he was strong, knew their weakness and forgave them, warning them, at the same time, not to tell lies again. He then took them and showed where the mountain of a monster lay dead.

The next thing Rājāchā Masthiā did was to put up on a lofty post a large flag with the inscription: "All who are of this city need

fear nothing. The monster their enemy is no more. Rājāchā Masthiā has killed him and is now king." The citizens who had migrated into neighbouring places read the inscription with great joy, and once more came and took possession of their shops and houses. All saw with admiration how their enemy lay dead, and blessed their deliverer, Rājāchā Masthiā.

They continued to live in that city for a time, during which Rājāchā Masthiā introduced his friend the carpenter to the fair lady in the subterraneous palace. They were so fascinated with each other, that Rājāchā Masthiā had pity on the poor carpenter, and so arranged for their wedding. In due time everything for the marriage was ready, and it was celebrated with great pomp; all the citizens were invited, and the rejoicings lasted for several days.

After living in this city for a year or two Rājāchā Masthiā thought of visiting other countries, and so, making over the charge of the city to the carpenter, he took his leave of him and his fair bride. The citizens did not like to part with him, but they could not keep him back: and before leaving Rājāchā Masthiā gave strict orders that all were to obey his friend, the carpenter, whom he gave them as king in his stead. He also gave the carpenter the diamond that he had taken from the *chukha* waist, as it was necessary for him to go in and out of the subterraneous palace. The carpenter could not bear the idea of parting with his friend, but after much argument he was persuaded to remain. However he said: "My dear *paethān* and friend, to part with you is almost death to me, but as it is your desire that I should remain here and be king in your stead, I agree it only to please you. But should anything occur to you how am I to know so that I can come to see you? Give me some sort of sign by which I could know that you are ill or in danger." Rājāchā Masthiā gave him a plant and told him to plant it near the palace door. He said, "If this plant should fade, know that I am sick

or in danger; if it should die, know that I am also dead." Thus saying Rājāchā Masthiā left with his friend, the hunter—the carpenter, his bride, and all the citizens shed tears, thinking that they should never see him again.

Rājāchā Masthiā and the hunter now both travelled for several days and came to another beautiful city. They went to an old woman's house and begged for lodging. The old woman willingly agreed. It so happened that she had seven fair daughters. The youngest and the fairest was, however, next to dead. She was afflicted by a big snake, and if any persons slept near her the snake used to come out of her and kill them. On this account the old woman was very down-hearted. Rājāchā Masthiā inquired of her the cause of her sorrow, and being informed what it was told the old lady to calm herself. He said he would make short work of the snake, if only she followed his instructions. He told her to buy him seven *mans* of wheat flour, seven *mans* of sugar, and seven *mans* of *ghī*. The old woman readily brought it, and Rājāchā Masthiā made a figure of a man out of them, and in the night he placed it by the side of the youngest daughter, and told the old woman on no account to put her hand, much less come close to the girl. Having done this Rājāchā Masthiā with a naked sword in his hand hid himself close by, waiting for the snake to come out. He had not to wait long before it came out and bit at the figure, and finding it taste sweet, it came out altogether, coiled itself on the wicaten figure, and set to eating it. Rājāchā Masthiā now thought it his opportunity, and with one stroke the snake dropped dead, cut into several pieces. From that moment the girl was cured of her malady, and went about as healthy and fair as the rest of her sisters. The old woman was very pleased and ran to take up one of the pieces of the snake, but Rājāchā Masthiā chopped off her hand, and taking it up left the house.

(To be continued.)

A NOTICE OF THE ZAFARNAMA-IRANJIT SINGH OF KANHAYYA LAI.

BY E. REHATSEK.

(Continued from p. 310.)

30. In the *Samvat* year 18-3 [A.D. 1826] it was reported to the Maharaja that Yār Muhammad was in the possession of a mare.

Laili by name, the like of which, in beauty and in speed, had never been owned by any sovereign. Accordingly he demanded it from

Yār Muhammad Khān, who sent back the messenger with an evasive answer: whereon Ranjit Singh ordered the **Sardār Buddhā Singh** forthwith to march with troops and artillery to Pēshāwar and to take the animal by force. At that time there was a free-booter, **Sayyid Ahmad** by name, in the vicinity of Peshāwar, who had many Hindustānī Muslim followers, and pretended that he would some day conquer the Pāṭjāb. Meanwhile, however, he contented himself with besieging a small Sikh garrison which held the fort of Haidrū, and on hearing of this, when approaching with his troops, the Sardār Buddhā Singh determined to liberate the said garrison. Sayyid Ahmad, however, learnt that the Sikh troops were far inferior to the number of his own followers, and therefore, surrounding them at some distance, cut off all supplies. The Sardār, who had, with his Sikhs, been thus compelled to fast during several days, sent a courier to demand reinforcements. Accordingly the Mahārājā issued instructions to the **Rājā Suchēt Singh**, and to the **Mahārājā Gulāb Singh** of Jammūn and Kashmir, to proceed with their armies by forced marches at once to Pēshāwar, in order to liberate the Sardār Buddhā Singh, whom the Afghans had encompassed. The prince Shēr Singh received similar orders, as well as the Generals Ventura and Allard, but when they reached Atak the news arrived that the Sardār Buddhā Singh, driven to despair by hunger, had broken the cordon which surrounded him with his troops, and had, after a hot contest, put Sayyid Ahmad to flight.

When Yār Muhammad became aware of what had befallen the freebooter in whose aid he trusted, he humbly excused himself to the Sardār Buddhā Singh, and sent him a *present* with rich presents, declaring however that the famous steed **Laili** had died. The Prince Shēr Singh reported all this in a letter to the Mahārājā, who thereon replied approving of the valour displayed by the Sardār Buddhā Singh, and instructed him to levy tribute from Yār Muhammad, and to re-install him as governor of Pēshāwar, but that in case it should be ascertained that he had falsely reported the death of the horse, to take it from him by force. The Sardār then returned to Lāhōr and was invested

with a robe of honour, but left the troops which had marched there under other commanders at Atak. Meanwhile the information arrived that Laili was not dead, but that Yār Muhammad, who feared to be deprived of the horse, had only removed it to another place of concealment. The Mahārājā therefore ordered the prince **Kharak Singh** to depart immediately to Pēshāwar, and to offer to Yār Muhammad any amount of money for the horse, but to remove him from his post of governor if he refused to part with it; and also to purchase at any price from **Shēr Muhammad** another celebrated horse known by the name of **Shērīn**. The prince not only himself obeyed, but took the precaution of marching with all the forces left in Atak to Pēshāwar, where he encamped. Yār Muhammad, however, immediately fled, leaving him in the possession of the town, where he made a sojourn of eight months; and purchased from Shēr Muhammad the horse Shērīn, paying him a lump sum of money for it, and giving him a landed estate the annual revenue of which amounted to 10,000 rupees.⁶⁵ He appointed **Sultān Khān** to be governor of Peshāwar, imposing upon him the obligation of sending annually the required tribute money to Lāhōr. Then the prince marched with the army as far as Atak, and it remained encamped there whilst he hastened to Lāhōr: whereon Yār Muhammad, as soon as he learnt that the troops had gone to Atak, immediately expelled Sultān Khān from Pēshāwar. Ventura, who was at that time in Atak, forthwith sent a courier to the Mahārājā asking for permission to deprive Yār Muhammad of the fort. To this Ranjit Singh replied that he desired nothing more from the latter than the horse Laili and his annual tribute as a loyal vassal; and the General was therefore to give him any price he might ask for the animal, but was to wage war against him if he refused to comply. Ventura accordingly despatched a friendly letter to Yār Muhammad, asking him to sell the horse and threatening him with hostilities if he demurred.

Whilst Yār Muhammad was preparing to give Laili to her Maqūm⁶⁶ the report arrived from Pēshāwar that the freebooter **Sayyid Ahmad** had again raised disturbances and was

⁶⁵ This is scarcely credible.

⁶⁶ The above is an allusion to the loves of Laili and

Mahmūd, sung by many bards, and sometimes compared by European writers to that of Romeo and Juliet.

plundering, with the intention of conquering the whole of the Pañjāb. Accordingly Yār Muḥammad advanced at once and attacked him, but being in want of the needful ammunition, he had to struggle with great disadvantages, fought valiantly, and was slain. Ventura immediately afterwards dispersed the freebooters, took possession of Peshāwar, and wrote to the Mahārājā for instructions, which soon arrived, and were to the effect that if Sultān Khān promised to pay the annual tribute, to remain loyal, and to part with Laīlī, he should be appointed governor of Peshāwar and enjoy the favour of the Mahārājā: in case, however, of the refusal of Sultān Khān to accept these proposals, Ventura himself was to govern the district of Peshāwar on behalf of Ranjīt Singh. The wishes of the Mahārājā having been communicated to Sultān Khān, he promised implicitly to obey them, and at once produced the mare Laīlī, offered a *nazarāna* and received a robe of honour in return for it. The arrival of Ventura in Lāhōr with Laīlī, which he presented to the Mahārājā, was a signal for great rejoicings and the showering of favours upon the General, who however, was not long there before the news came that, as soon as he had departed from Peshāwar, Sayyid Ahmad had arrived there, and that Sultān Khān, being a coward, had paid him allegiance, so he had left him in his post of governor and continued his depredations, which, if conducted on a more extensive scale, would eventually spread to the Pañjāb unless checked. Accordingly the Mahārājā forthwith despatched the prince Shēr Singh with troops to punish the robbers, and after the latter reached the Hazāra country he issued proclamations to the inhabitants that they ought not to flee and had nothing to fear from the Sikh troops. Then he attacked the enemy, thousands of whom were slain in a single engagement, Sayyid Ahmad himself with his relative and Wazīr Maulavi Isma'il being among the number. When tranquillity had been completely restored, and the rebels utterly exterminated, the prince again installed Sultān Khān as governor of Peshāwar, and returned with the troops to Lāhōr, when the Mahārājā received him with great honours.

31. Ranjīt Singh, who entertained great affection for the king of England, desired to manifest it by sending him the following pre-

sents:—Very fine garments of wool and silk; priceless gems, such as diamonds, rubies, and turquoises; a beautiful carpet of Kashmīr-wool interwoven with gold; a great tent of woollen cloth, the like of which had never been seen; and various other rarities. The bearer was the great Amīr Faqīr 'Azizu'ddīn, whom the Governor-General received in *darbār* at Simla, and graciously thanked after he had delivered his message. The presents arrived safely in London, and were highly approved of by the king, who, in his turn, sent various gifts to the Mahārājā, and among them a vehicle called a *phaeton* with four noble and swift-footed mares, and a beautiful Arab steed. The envoy, Mr. Burnes, who had brought these gifts from England, was received by the Mahārājā with great honours in a *darbār* at Lāhōr, and Mr. Wade, the Agent of the English Government, who usually resided at Lōdiāpā, having arrived, was likewise present. After the termination of the *darbār* the Mahārājā gave a brilliant state dinner. Then the Sārdār Harī Singh with Faqīr 'Azizu'ddīn and Mōtī Rām, who was also a high dignitary at the court of the Pañjāb, departed to Simla with presents of fine garments and precious stones for the Governor-General, with the request that the Mahārājā desirous of strengthening the bonds of friendship between the English Government and himself, wished to have a personal interview with His Excellency, whom he begged to point out a convenient and pleasant locality for the meeting. The Governor-General graciously received the three envoys, and, assuring them that the king of England entertained the sincerest friendship for their sovereign, mentioned Rūpar as the place most convenient for the interview. When the three envoys returned with this information, preparations were immediately begun, and all the troops who were to escort the Mahārājā obtained brand new uniforms; the courtiers and high *amīrs* also received notice to make arrangements for appearing in the best manner they could on that solemn occasion; and, all being ready, the Mahārājā started with 10,000 cavalry, 6,000 infantry and ten pieces of artillery, but first proceeded with all these troops to Amritsar where he spent two weeks, celebrating the Dasahra festival and carousing. He then he marched straight to Katgaḍh and encamped

The **Governor-General**, having been informed of the Mahārājā's arrival, likewise started with his officials and troops, taking up his quarters at Rûpar, whence he despatched a high officer, **Ramsay** by name, to welcome Ranjīt Singh, who, in his turn, made a complimentary reply. When the said English officer departed, the Mahārājā sent his own son and heir—apparent, Kharak Singh, at the head of a deputation, which consisted of a number of *amirs*, and among them **Sri Mahārājā Gulāb Singh**, the Governor of Jammūn and Kashmir, **Sardār Hari Singh**, **Rājā Sangat Singh**, **‘Atar Singh**, and **Shām Singh**, to wait upon the Governor-General for the purpose of inquiring after his health. After the prince had crossed the river and approached the Governor-General's tent, His Excellency came out with a number of English gentlemen and took the deputation into the *darbār*-tent, where, after the exchange of compliments and presents, the *amirs* were invested with robes of honour, and returning informed the Mahārājā of the polite reception they had met with. He was highly pleased with their report, but was disquieted by the suggestions of some malevolent persons, who averred that it would have been more safe to have the interview in his own dominions, at Amritsar, where he would have been in perfect security, whereas in this place the English might during the interview easily surround him and make him prisoner. The apprehensions of the Mahārājā having somehow been brought to the notice of the Governor-General, he immediately despatched his Secretary to Ranjīt Singh to assure him that the English were an upright nation, incapable of treachery, and that nothing but closer relations of amity would result from the meeting. Although the fears of the Mahārājā had been almost totally dissipated by the declarations of the Secretary, he nevertheless considered it proper to consult his astrologers on the subject, and summoned to his presence all who possessed a subtle knowledge of the stars, as well as all the Brāhmins who had studied the *Vedas*. They contemplated the rotations of the spheres and calculated the motions of the stars, deeply meditated on the results yielded by their calculations, and at last declared, that fortune being propitious, and the Creator helpful, the Mahārājā ought fearlessly to meet the Governor-General, who

was his well-wisher, and only observe the precaution to take with him **two apples**, one of which he must at the time of meeting present to the Governor-General, and immediately consume the other himself.

32. The Mahārājā having issued orders to the cavalry to get ready, and to his *amirs* to dress in silver and gold attire, and to bring out their elephants and gilded *hauulās*, their horses and silver saddles, mounted his *hauulā*, while the artillery fired a salute, the bands played, as the drums resounded, as the Mahārājā started, flanked by cavalry, and accompanied by his *amirs* on elephants. When the cortège arrived at the bank of the river, the Mahārājā ordered a halt, and desired only 700 cavalry and 200 infantry to accompany him to the other side. They all marched across the bridge followed by **Ranjīt Singh**, who then passed on to the road, one side of which lined by gigantic *Pûrbiās* and the other by European troops, all drawn up in military order. On this salutes of artillery and musketry were fired and military bands played. Then a high English officer came to meet and accompany the Mahārājā, and when the procession had reached the **Governor-General's** tent His Excellency came out, lifted his hat, warmly shook hands with the Mahārājā, and seated him on an elevated place in the tent, with the English gentlemen, whose heads were uncovered, on his right, and his own *amirs* on his left side, all sitting in great dignity with golden turbans but naked feet. After the Governor-General had uttered a few sweet words of welcome to the Mahārājā, he ordered the band to play, and whilst the audience was being enchanted with delightful music, the presents intended for the Mahārājā were brought forth, laid out on fifty golden trays, displaying turquoises, rubies, dishes full of gold, and wonderful clocks. The Governor-General also presented the Mahārājā with an enormous elephant and a golden *hauulā*, two fleet horses with costly trappings, and a dinner-service, the plates of which were of silver and gold; and lastly accompanied him to the place of leave-taking.

33. On the same day the Mahārājā ordered his son Prince **Shēr Singh** likewise to pay a visit to the **Governor-General**, and to request him to condescend on the next day to **review the Sikh troops**. The invitation having

graciously been accepted, the Mahārājā had a splendid tent pitched with red and gold carpeting, an elevated seat and 20,000 [?] chairs around it. A number of other tents with silver poles and silken ropes surrounded the large one, all guarded by gold-turbaned servants, who had silver *biltans* in their hands. All the troops having been drawn out, and the line through which His Excellency was to pass arranged, the two princes Shēr Singh and Khafak Singh were sent to inform Lord [William] Bentinck that everything had been got ready; whereon the Governor-General at once proceeded to the bank of the river, whilst the Mahārājā approached it on the other side to meet him, and the Mahārājā's artillery having fired a salute, they proceeded together to the tent where they took their seats, surrounded by English officers and Sikh Amirs. The *nazarāna* having been presented, the Governor-General touched it with his hand according to the usual custom, and then a hundred ornamented trays representing boats were brought in, loaded with costly garments, rubies, corals, pearls, diamonds, silver, gold, and various curiosities from Kāshmir and Multān, as well as other presents, such as every kind of silk and gold embroidered cloth, heaps of woollen stuifs, necklaces of jewellery, swords, muskets, bows and arrows, pistols, carbines, battle axes and lances. The Mahārājā presented to the Governor-General in addition to the above, four fleet horses with golden saddles, and two mountain-like elephants, for which he expressed his best thanks and then took leave.

34. The Mahārājā having after these two interviews determined to give an **entertainment to the Governor-General** on the third day, ordered all the preparations to be made, and these consisted in furnishing a splendid tent with elegant carpets. Musicians, singers and dancers of both sexes were ready to enliven the fest, and thousands of chandeliers with crystal globes were hung up to illuminate it. Food of every kind of drink of every variety, with fruits and confectionery, having all been provided in the greatest abundance, and the countless chandeliers, lamps, candles and flambeaux lighted in the evening, the scene presented a magical and fairy-like aspect. Ranjit Singh despatched the Mahārājā Gulāb Singh to apprise the Governor-General that all was ready, who then

entered his carriage with his retinue and started immediately. He was met half way by Ranjit Singh, who then conveyed him to the improvised banquetting hall, where the English guests sat on chairs, and the *amirs* in their usual manner. Then the musical entertainment began with dancing and singing, in which the blooming beauties of the Pañjāb naturally played the chief part. Refreshments were partaken of, and potations indulged in to such a degree that the effect of the latter began to manifest itself at last in an uproar, to drown which the Mahārājā immediately gave orders for the bands to strike up, and when the tremendous noise made by the united kettle-drums, bugles, fifes, trumpets and clarionets ceased, the Mahārājā added to the abovementioned gifts for the Governor-General one more elephant with a golden *haukī*, with two beautiful horses, and presented to all the English guests shawls, golden turbans, and robes of honour, after which they took their leave and departed.

35. On the evening of the fourth day the Secretary of the Governor-General made his appearance on horseback in the camp of the Mahārājā, and invited him to an **entertainment**, whereon he left his camp with the *amirs* of his *darbar*, and was met on the road by the Governor-General, who took him to a brilliantly illuminated tent in which beautiful English ladies were sitting on one side, and gentlemen on the other. A band played, refreshments were served, and the Governor-General presented the Mahārājā with horses having golden saddles, with Indian and Chinese curiosities, wonderful garments, beautiful turbans, necklaces of diamonds and of other precious stones. Lastly the Mahārājā took his departure.

36. The Mahārājā having, through the Sardār Hari Singh, conveyed to the Governor-General his desire to **witness the military exercises of British troops**, the latter invited him to be present. Accordingly all the European and Indian troops, cavalry and infantry, were drawn out, and after performing some manoeuvres they exhibited some target practice with muskets and artillery. After which the Mahārājā first ordered the Rājā Dhyān Singh, who had some knowledge of the matter, as well as a number of his bodyguard, to show their skill, and they were successful in hitting the target

Lastly the Mahârâjâ himself showed his horsemanship and agility by galloping towards a brass vessel set up on a lance for a target and cutting it in two with his sword whilst passing. Then he departed to his camp.

37. The next morning **Ranjit Singh** ordered all his troops to parade, and sent three of his Sardârs to invite the Governor-General to behold the spectacle. When His Excellency arrived, the troops saluted according to the English fashion, and salvoes of artillery thundered; after this a sham fight was executed, which elicited the applause of the Governor-General, who then returned to his quarters. The next day, being the last of the Mahârâjâ's sojourn, he mounted an elephant and paid a visit to the Governor-General for the purpose of taking leave. On this occasion he was presented with two brass cannon and ten Arab horses. After this visit he returned to his own camp to spend a few days more in hunting, because the locality pleased him greatly, and then he went to Amritsar and paid his devotions at the temple of Râmdâs, and after distributing a great deal of money in alms, he marched to Lâhôr.

38. After the Mahârâjâ had thus strengthened the bonds of friendship between his own and the English Government, certain disloyal vassals again refused to pay the customary tribute. Accordingly he determined first to send to Derâ Ghâzi Khân his heir apparent, with the brave Frenchman **Ventura**, instructing them to regulate affairs there and then to attack the Nawâb of Bahâwalpûr, who, if he paid tribute, was to be confirmed in his post, otherwise he was to be removed therefrom. The heir apparent was then ordered to march also to Sind to realise tribute from the Amîrs of that province; whilst the **Sardâr Hari Singh** was to go to Peshâwar to exact the same from the proud **Sultân Khân**, and, the **Yûsufzâis** of that region being a stiff-necked race, he was told to deal with them severely.

Accordingly **Kharak Singh** and **Ventura** advanced with their troops first to Derâ Ghâzi Khân, subjugated the rebels and obtained the tribute. When they arrived in the province of Bahâwalpûr, which was likewise in a state of rebellion, the Nawâb became so frightened that he immediately paid the required sum of money. Then the heir-apparent marched to Sind and

reached Sakhar (Sukkur) where he likewise collected from the Amîrs all the tribute he was able to extort, and returned victoriously to Lâhôr to his father, who congratulated him on what he had accomplished.

A courier now suddenly arrived from **Bahâwalpûr** with the news that the Nawâb had thrown off his allegiance, and had placed himself under the protection of the English, whose vassal he had become; **Mr. Wade** having accepted his submission and given him a *sanad* to that effect: moreover the Governor-General had sent the Indian army to conquer Sind. The Mahârâjâ was enraged on the reception of this news, but, as he desired to remain on good terms with the British Government, he took no further notice of the matter, and wrote no letter of remonstrance to the Governor-General.

Meanwhile the **Sardâr Hari Singh** had punished the **Yûsufzâis**, but had been waiting four months near **Peshâwar** hoping that **Sultân Khân** would at last pay his tribute. The latter's forces, however, being twice as numerous as those of **Hari Singh**, he was in no haste to comply, so the **Sardâr** complained to **Ranjit Singh**, who consulted his darbâr on this subject. The members of which arrived at the conclusion, that there being no doubt of **Sultân Khân's** disloyalty, and of his sympathy for the **Kâbul Government**, he ought to be attacked and **Peshâwar** conquered. The Mahârâjâ accordingly ordered the **Prince Naunihal** with **Ventura**, and another officer named **Court**, as well as **Têj Singh**, forthwith to march with numerous troops to **Peshâwar**. When they reached the vicinity of that fort, **Sultân Khân**, trembling with fear, sent an envoy to meet the prince and to express his amazement at the intention of attacking one who was so loyal to the Mahârâjâ as himself, and not only ready to pay tribute, but prepared to sacrifice his life for him. The prince, however, sent the reply that he was merely the servant of the Mahârâjâ whose orders he had come to execute, and that if **Sultân Khân** was willing peaceably to surrender **Peshâwar**, his life would be spared, but not if he refused to do so. Irresolute whether to yield or to resist, the perplexed Governor of **Peshâwar** asked in a letter assistance from **Dôst Muhammad**, but **Kâbul** being at that time in a great state of disturbance, it could not be

given; so he surrendered his treasury, and ceded his post to the prince, who then treated him kindly and himself assumed the Government, carrying on the administration with such

leniency towards the Afghâns, that the whole province became loyal to the **Mahârâjâ**, who for this bestowed a costly robe of honour upon the prince. *(To be continued.)*

CORRESPONDENCE.

THE YAVANAS OF ORISSA.

To the Editors of the Indian Antiquary.

SIRS,—Sir W. W. Hunter in his work on Orissa refers to the attacks continually made upon the shores of Bengal during the 7th, 8th and 9th centuries by Pirates called Yavanâs. Who were these Yavanas? They can have had nothing to do with the Yavanas of the Epics,—the Greeks and their descendants in Bactria, who were not a maritime people, and lived too far away back in space

and time to have troubled Orissa at this period. May I suggest that they were Malays from Java? Java we now know from the Camboja inscriptions was subject to the Camboja kingdom in the 7th century; and as far as the evidence points, and it accumulates rapidly, it received its Hinduism at that very time, not from India but from Camboja; and it would seem to have been a very active period of Malay energy.

Yours etc.,

HENRY H. HOWORTH.

MISCELLANEA.

CURIOSITIES OF INDIAN LITERATURE.

A QUIANT BLESSING.

The following blessings were collected by me in Mithilâ. They are much admired by the Pandits:—

I.

गजोत्पले हरिभुजामिह के शवस्थ
यस्योरसीन्दुरदनं हि जटाकलापे ।
शं खाम्बरो हि पवनादरिनाथसुनुः
कान्तागशो ऽगतनया विपुलं ददाद् ॥

'May he—who sleeps on a mountain (अगशो—i.e. Śiva), whose (यस्य) beloved is the Daughter of the

Mountain (अगतनया—i.e. Pârvatî), whose garment is the ethereal void (खाम्बरो), whose son is the lord (i.e. Kumâra) of the enemy (i.e. the peacock) of the eaters of air (i.e. serpents), on whose breast (उरसि) is the king (राजा—i.e. Vâsuki) of the eaters of frogs (हरिभुजाम्—i.e. snakes), whose repast (अदनम्) is on the fleshless (उत्पले) head (के) of a corpse, and on the top-knot of whose matted hair (जटाकलापे) is the moon (इन्दुः)—give thee abundant prosperity.'

G. A. GRIERSON.

BOOK NOTICE.

CONTES ET LEGENDES ANNAMITES. par A. LANDES, Saigon, Imprimerie Coloniale, 1886. pp. viii. 392 in 8vo.

This collection of Annamite tales and legends, published first in the *Excursions et Reconnaissances* (Nos. 20-23, 25, 26) will be welcome to all students of Folklore, and more especially to those interested in Annamite ideas and manners. Popular tales are the same everywhere; and what is special to the Annamite Folklore is that it is essentially local; every rock, every pagoda has its own legend. M. Landes thinks that the Indo-Chinese popular literature has come from abroad. And several of the tales he has gathered do look more like a summary analysis of a foreign tale picked up by chance, than a national creation. But their strict localisation makes them valuable for a knowledge of the Annamite history and customs.

In this connection, we may aptly notice here the *Index des caractères Chinois contenus dans le Dictionnaire Chinois-Anglais de Williams, avec le prononciation Mandarine Annamite* par M. Phan-duc-hoa, Saigon Collège des Interprètes, 1886, pp. 449-193 in 4to.

This index, done by a *lettré* of the Collège des Interprètes at the suggestion of M. Landes, will be of great practical utility, as it gives for each Chinese character its Chinese Mandarin pronunciation, both according to Williams and the Shanghai Jesuit pronunciation, and its Cantonese pronunciation, as well as the Annamite Mandarin. It will be not less useful for comparative philology, as it will help us to establish the laws of permutation between the Chinese and the Sino-Annamite, and, by recognising thus better what in the Annamite is of Chinese origin, to sift out the specially Annamite element.

A BUDDHIST STONE-INSCRIPTION FROM SRAVASTI,
OF [VIKRAMA]-SAMVAT 1276.

BY PROFESSOR F. KIELHORN, C.L.E.; GÖTTINGEN.

I EDIT this inscription from two good rubbings supplied by Mr. W. Hoey, B.C.S., and forwarded to me by Mr. Fleet. The stone which holds the inscription was found by Mr. Hoey at **Sêt-Mahêt**,¹ the ancient **Srāvastī**; "in the Jetavana mound, in the ruins of an essentially Buddhist building with monastic cells; in a stratum which indicated that it had been placed in a restored building."

The inscription consists of 17 full lines, and one short line containing merely the date. The writing covers a space of about 2' 8½" broad by 1' 2½" high, and is throughout well preserved.—The size of the letters is from ⅝" to ¾".—The characters are *Dēvanāgarī*, and there is nothing remarkable about them except that the *anusvāra*, instead of being written *above* the *akṣhara* after which it is pronounced, is 11 times written *after* it, with the sign of *virāma* below the *anusvāra*.—The language is Sanskrit, and except for the introductory blessing and the date at the end, the inscription is in verse. The name of the composer of the verses is Udayin (line 17). From a grammatical point of view I may draw attention to the wrong form *avamaṇya*, line 1; to the wrong compound *taṭpañchamah*, line 10; and to the unusual derivatives *janīna*, line 7, and *udarambhariṇa*, line 14.—In respect of orthography I would note the employment of the dental for the palatal sibilant in *soṃvara*, line 1, *sāhya*, line 1, *vaṃśe*, line 3, *atīśayī*, line 3, *sakunī*, line 4, *vaṃsa* line 5, *subhraiṛ*, line 5, *pañchasana*, line 10, *vahsā*, line 15, and *prasastīm*, line 17; and the fact that *va* is throughout denoted by the sign for *va*.

The inscription is dated in the year [of the Vikrama era] 1276, corresponding to A.D. 1219-20, and is of some interest as showing that Buddhism had not become extinct

in northern India in the first half of the 13th century A.D. For it records that a certain Vidyādhara, son of Janaka, and grandson of Bilvaśiva, of the Vāstavya family, established a convent for Buddhist ascetics at the town where the inscription was originally put up. Janaka, the father of Vidyādhara, is described (line 8) as the counsellor of **Gōpāla**, ruler of **Gādhipura** or Kānyakubja; and Vidyādhara appears to have held a similar position under the prince **Madana** (line 13), probably a successor of **Gōpāla**. The town where the convent was established, is called **Jāvriṣha** (or possibly **Ajāvriṣha**); it is said to have been built by Māndhātā, of the solar race, and to have had "its protection entrusted to **Karkōṭa**."

We know that **Jayachandra** of Kanauj was defeated and Kanauj taken by the Muḥammadans in A. D. 1193; and it is therefore interesting that our inscription, like another inscription pointed out by Sir A. Cunningham, *Archæol. Survey of India*, Vol. XI. page 128, should speak "of the Hindu kingdom of Kanauj as if it were still in existence."

The place **Jāvriṣha** (or **Ajāvriṣha**) mentioned in the inscription, I am unable to identify at present. In my opinion, there is just a possibility that it may be Jaunpur or some place close to it. According to Sir A. Cunningham, *loc. cit.* pp. 103 and 104, Jaunpur had an older name which is as yet unknown: there is near it a fort overhanging the river which was called **Karārakōṭ**; and "four miles to the south-east of Karārakōṭ, on the site of the present Zafarābād, stood the palace of the later kings of Kanauj, with whom this was a favourite residence." But my difficulty is that Jaunpur is about 130 miles distant from the place where the inscription was actually found

¹ Ordinarily written *S'hêt-Mahêt*, see e.g. *Archæol. Survey of India*, Vol. I. page 333. *Bull. Soc. Ind.*, Vol. II. page 1; *Lange, Panchen*, page 55. The above spelling I owe to Mr. Hoey, who writes as follows: "Our earliest settlement inquiries found the Jetavana mound named *S'et M'et*, and the city named *M'et M'et*. This too is the spelling adopted by local Pandits, and by *fatwāris* who write Hindi. The form *S'et-Mahêt*

(*सैत मेट*) is a corruption for the sake of the rhyme. It is curious that some Nepalese who visited the ruins while I was excavating, called the place *M'et* (*महेत*). On the map of the ruins of Srāvastī, *De Goeje, Survey of India*, Vol. I. Plate L. *M'et* is given as the name of the Jetavana Monastery mound, and *S'et* as the name of the town.

TEXT.²

- 1 Ôm namô Vitarâgâya || Mârân³=ashta niyamyâ dikshv=adhipatîn=âyôjya sat[t*]v-
ôdayê durllamghyâny(ny)=avamanya⁴ Sa(sa)ñva(mba)ra-ripôr=âjñ-âksharâny=âdritah ;
uddhartum yatatê sma yah karuṇayâ śrī-Sâ(sa)-
- 2 kya-simhō jagad=vô(bô)dhim prâpya cha Vu(bu)ddhatâm=abhogatah sa tvâm
paritrâyatâm || Samsâr⁵-âmbhōdhi-târâya Târâm=uttâra-lôchanâm | vandê
gîrvvâṇa-vâṇinâm Bhârâtîm=adhidêvatâm ||
- 3 Mâmdhat⁶-âkhyah śatru-jieh=Chhakra-tulyô vamsê(śê) Bhânôr=bhânû-têjô-tisâ(śa)yi | nity-
anandî sâdhu bhôktâ trilôkîm rājñâm=âdyaś=chakravartti va(ba)bhûva ||
Svêchebham⁷ bhrâmyan=kadâchit=sara-
- 4 siruha-rajô-raji-chitrikrit-âmbhah samyag=drishtvâ sarô=ntar-madakala-sa(sa)kuni-vrâta-
râv-âbhiramyañ | karttum kîrttêr=vitânâm sucharita-muditô mîdibhir=âpûrya
yatnât=**Karkkôṭ**-âdhîna-ra-
- 5 ksham sva-puram=idam=athô nirmamê Jâvriśh-âkhyam || Tasminn⁸=abhûvan=dhaninô=
tidhanyah śrī-pûrvva-**Vastavya**-kula-pradîpâh | ady=âpi yad-vamsa(śa)-bhavair=
yaśôbbhir=jaganti sn(śu)bhair=dhavalî-
- 6 kriyantê || Têshâm⁹=abhûd=abhijanê jaladhâv=iv=êndur=imdu-dyntih prathita-**Vi(Bi)-**
lvasiv-âbhîdhânah | yasya Smarâri-charaṇâm(vu(mbu)ja)-vatsalasya lakshmîr=
dvijâti-sujan-ârthijan-ôpabhô-
- 7 gyâ || Saujanya¹⁰-âm(vu(mbu)nidhêr=udâra-charita-pratyasyamân-ainasah sâdhûnâm=uday-
aika-dhâma janau-sthânâm śriyah sat[t*]va-bhûh | tasy=âsij=**Janakô** janîna-
hrîdayah putrah satâm=a-
- 18 grâhîr=mânyô **Gâdhipur**-âdhipasya sachivô **Gôpâla**-nâmnah sudhîh || Têñ¹¹=ôchchakair-
abhijan-âm(vu(mbu)nidhêh prasûtâ Lakshmîr=iv=âchyuta-vibhûshâṇa-kânta-mûrtti |
ânanda-kanda-ja-
- 9 nani janani-kulânâm Jijj=êti sambhîta-kulasthitin=ôpayêmé || Tâbhyâm¹²=abhûvams=
tanayah shad=va shadbhir=mukhair=êka-tanur=ya êkah | jyâyân=sutah Pippaṭa-
nâmadhê-
- 10 yô dhîhân=iv=Âgni-prabhavah Śivâbhyâm || Tat¹³-pâñchamah Pâñchasa(śa)r-ânukâri
tayô=tanûjô=tanu-kîrtti-kandah | vidy-âvavô(bô)dhâd= anukîrttyatê yô **Vidya-**
dharô nâma yathârtha-
- 11 nâmâ || Rasâdhikam¹⁴=abhivyâpi Girîśa-charaṇ-âsritâm | hams=îva mânasam yasya
jâhati sma na Bhârâtî || Mâdhuryam¹⁵ madhunô mudhâ himaruchêr=ânanda-
mêdhâvitâ mi-
- 12 tiy=âiv=ân(vu(mbu)nidhêr=ggabhîrîma-guṇas=tumîgatvam=adrêr=alam | yasy=aikaika-guṇ-
âdhirôhâṇa-girêh saujanya-sâmîdr-ôl[t*]asat-pîyûsh-aika-nidhêr=gguṇêna guṇinah
sarvvê=py=adhaś=chakrîrê || Yasmâi¹⁶
- 13 gaj-âgama-raha-sya-vidê gajanâm=ânandanîh kalayatê dhuram=uddhurâya | bhûpâla-
mauli-tilakô **Madana**h pradâna-mân-âdibhîh kshitipatîh spriyahâm-va(ba)bhûva |
Dêvâ-
- 14 layaih prathayatî nija-kîrttim=uchchaih pushya[t*]-dvija-vrajam=udêtum=alam=va(ba)-
bhûva | yêñ=ârjjitam dravîṇam=ârttajan-ôpakâri jîvâtu-sambhîta-mudâm=udaram-
bharîṇam || Sat[t*]va¹⁷-sârtha-ja-
- 15 ritrâṇa-krita-kâyaparigrahañ | abhûd=a-bhûtapûrvô=yam Vô(bô)dhîsat[t*]va iv=âparah |
Âtmajñâta(na)¹⁸-kritôday[ê]na vigalad-râgâdi-dôsh-âsraya-prôdguchebhan-manasâ
vichârya va(ba)husô(śô)

² From the rubbing.³ Metre, Śārdūlavikrīḍita.⁴ Read *avamanya*.⁵ Metre, Śloka (Anuśtubh).⁶ Metre, Śloka.⁷ Metre, Śāgadhara.⁸ Metre, Upajāti.⁹ Metre, Vasantatilakā.¹⁰ Metre, Śārdūlavikrīḍita.¹¹ Metre, Vasantatilakā.¹² Metre, Indravajrā.¹³ Metre, Upajāti.¹⁴ Metre, Śloka (Anuśtubh).¹⁵ Metre, Śārdūlavikrīḍita.¹⁶ Metre, Vasantatilakā; and in the next verse.¹⁷ Metre, Śloka (Anuśtubh).¹⁸ Metre, Śārdūlavikrīḍita.

- 16 madhyasthatām Saugatē[*] tēu=irādhita-satpathēna yaminām=ānanda-mūl-ālayō nirmm[*]
py=ōtsasrijō vihāra-vidhinā kīrttē=iv=aik-āsrayaḥ || Sadvō(dbō)dha¹⁹-vaṁdya-
chari-
- 17 tasya nay-aika-dhāmnaś=chām̐dr-āvadāta-hridayaḥ sumatiḥ kalāvān | asya priyēshu
nirataḥ subhagāmbhavi[sh]ṇuḥ samva(mba)ndha-va(ba)ndhur=Udayī vidadhē
prasa(śa)stim ||
- 18 Samvat 1276[11*]

TRANSLATION.

Om !

Adoration to him
who is free from passions !

May the illustrious Śākya lion protect you !
—he who, having at the rising of truth (*first*)
restrained the eight Māras, (*and then*) attracted
to himself the lords over the regions,²⁰ having
treated with contempt the difficult-to-be-trans-
gressed words of command of the enemy Śam-
bara, full of zeal through compassion exerted
himself to deliver the world ; and who, having
reached the Bōdhi-tree, attained the *status* of a
Buddha !

To cross the ocean of worldly existence, I
adore the saving Bhārati, whose eyes have
protruding pupils,²¹ the goddess presiding over
the utterances of the gods.

(L. 3).—In the race of the Sun there was,
surpassing the splendour of the sun, the univer-
sal sovereign, the first of kings, named Mān-
dhātā,²² conquering the enemies, equal to In-
dra, ever gladdening, well protecting the three
worlds.

Once upon a time roaming about at his plea-
sure, he saw a pleasant lake whose waters were
variegated with lines of the pollen of lotuses,
(*and which was*) charming with the cries of
flocks of sweetly singing birds in it ; and having
strenuously filled it with earth, he, who de-
lighted in good conduct, to make a canopy for
his fame, then built this town of his, named

Jāvrisha,²³ the protection of which was en-
trusted to Karkōta.

(L. 5).—In it there were wealthy (*and*) very
fortunate (*people*), lights of the illustrious²⁴
Vāstavya family, by the splendid fame of
whose race the worlds are rendered white even
now.

As the moon (*is born*) from the ocean, so in
their family there was a *personage*, shining
like the moon, whose name Bilvasiva was
famous : devoted as he was to the lotus-feet
of (Śiva) the enemy of the god of love, his wealth
was an object of enjoyment to the twice-born,
to virtuous people, and supplicants.

(L. 7).—He, an ocean of benevolence, who
was counteracting sin by his noble conduct, had
a son Janaka, a unique home of the elevation
of the good, a birthplace²⁵ of fortune, a site of
goodness, with a heart kind to people,²⁶ the
foremost of the good, the honoured wise coun-
sellor of the ruler of Gādhipura,²⁷ named
Gōpāla.

He, who well maintained the prosperity
of his family, married the daughter of a
noble race, named Jijjā, who was causing joy²⁸
to her mother's family, (*and who*), inasmuch
as her lovely body possessed imperishable orna-
ments, was like Lakshmi, born from the ocean,
whose lovely body beautifies Achyuta (Vishnu).

(L. 9).—From these two there were born no
less than six sons, just as the intelligent pro-
geny of fire called Pippata, who one, with one

¹⁹ Metre, Vasantatilakā.

²⁰ Compare Kern, *Buddhismus*, German Ed. Vol. I. pp. 88, 89. It is difficult to say why the author of the verse should speak of eight Māras, the number eight would be more appropriate for the guardians of the four regions and the four intermediate regions.

²¹ The original contains a play on the word *Ura* ; and there is clearly an allusion to the *Par's*, or wives (*aktis*), of the Pityām-Buddhas, one of whom is called Uchhanā. See Kern, *ib.* Vol. II. pp. 215 and 216 ; and *q. v.* ante, Vol. X. p. 187.

²² *Māndhātā*, of course, is the Nom. case of *Māndhātā* ; but we have the same form, instead of the base of the word, in *Māndhātā-pura*.

²³ In the original, the name may be either *Jāvrisha* or *Ajāvrisha*.

²⁴ *Sri-pūta*—I take in the sense of *sri-gate*, or simply

sri. A *sri-Vistarga-mahācāra* we find *q. v.* in the Mahōba inscription, of Samvat 1240, *Arch. Survey of India*, Vol. XXI. Plate XXII. line 12, and in another Mahōba inscription, *ib.* Plate XXIII. line 12 ; and a *Vāstavya-vāsa* in line 27 of an unedited Malhar inscription of Chōla, Samvat 919.

²⁵ *Janma-sṭhāna* I take to be used in the sense of *uppatisthāna*.

²⁶ The word *janaka* I cannot find anywhere else, it is formed from *jan*, as *vasajanaka* (*v.*, *vasajanaka*) ; *hidana* is from *vasajanaka*. See Pagan V. 19.

²⁷ Gādhipura is Kanyakubja. See *ante*, Vol. XV. pp. 8, 11, etc.

²⁸ One of the two words *hṛdi-patant* is superfluous, Jijjā may be called *śrī-mahā-sāradā* (see *q. v.* ante, p. 202, line 1), or *mantra-janaka*.

body, is endowed with six faces, (*was born*), as the elder son, from Śiva and his consort.²⁹

Their fifth son of those³⁰ (*side*), resembling the five-arrowed (Kāma), (*and*) the root of no slight fame, who is celebrated for his knowledge of wisdom, is named, with an appropriate name, **Vidyādhara**, 'the holder of wisdom.'

(L. 11).—Whose comprehensive mind, full of taste (*and*) attached to the feet of Śiva, Bhārati (the goddess of eloquence) never abandoned, just as the swan never leaves the extensive Manasa lake, full of water (*and*) situated at the foot of the lord of mountains (Himālaya).

Vam is the sweetness of honey (*and*) the proficiency in (*creating*) joy of the cool-rayed (moon): a sham indeed is the quality of depth of the ocean (*and*) the height of the mountain: —(*but*) enough' by the excellent qualities of this mountain for the ascent of every single excellency, of this unique receptacle of the abundant sparkling nectar of benevolence, everything whatever that is endowed with excellent qualities has been surpassed!

Him, who knew the secret doctrine regarding elephants, (*and*) who, unrestrained, bore the burden of elephants that was causing pleasure (*to him*), the head-ornament of princes, the lord of the earth, **Madana**, sought to attach to himself by gifts, honours, and so forth.

(L. 13).—The wealth acquired by him, who spread his fame aloft by (*building*) temples,—(*wealth*) which gave relief to people in distress, (*and*) filled the bellies³¹ of those filled with joy at (*the receipt of*) food,—was sufficient to exceed the multitude of the twice-born supported (*by it*).

He was as it were another Bōdhi-attva, such as had never existed before, having assumed a human body for the protection of the multitude of living beings.

(L. 15).—Elevated by the knowledge of the soul, (*and*) with a mind rising above the attachment to passion and other sins of which he was getting rid, having again and again pondered on the indifference towards the doctrine of Sugata, he, having resorted to the good path, ceased to be built and granted to the ascetics, after the manner of convents, a dwelling causing joy, a unique home as it were of (*his own*) fame.

Taking delight in whatever is dear to him, the unique home of prudence, whose conduct is an object of adoration for people of true knowledge, **Udayin**, (*his*) kinsman by association, whose heart is pure like the moon (*and who is*) wise (*and*) accomplished (*and*) becoming prosperous, has composed (*this*) eulogy.

The year 1276.

THE RUPEES OF THE SURI DYNASTY.

BY CHAS. J. RODGERS, M.R.A.S., &c.

Marsden in the *Numismata Orientalia Illustrata* gives figures of six **Sūrī rupees**, and Thomas in the text and plates of his *Chronicles of the Pathān Kings of Delhi* gives figures of seven. So, when some years ago I came across my first **Sūrī rupee**, I determined to collect a complete set from the first year of **Shēr Shāh** to the return of **Humāyūn**, i.e., from 945 A.H. to 962 A.H., and in my *Supplements to the Chronicles* above mentioned, I have already published a rupee of **Sikandar Sūr** dated 962 A.H., Lahore mint, and an eight anna piece of **Ibrāhīm Sūr**. I have also published a full rupee of **Humāyūn** struck shortly after his return at the end of 962 A.H.

²⁹ From this verse it appears that Pippata is another name of Skanda or Karttikeya. The writer, though he names Kārttikeya the son of Śiva and Pārvatī, at the same time alludes to the legend according to which Karttikeya was son of Śiva without the intervention of

None of these coins were my own; but the rupees in the accompanying plates were **all collected by me** in the *bāzārs* of the **Panjab**, though they, too, are no longer in my own cabinet, but in that of the Government Central Museum, Egmore, Madras. However, Dr. Bide, who was Curator of that Institution when I parted with them, kindly allowed his artist to draw them for me. And, as few collectors in India possess so complete a set, perhaps the readers of this Journal will be glad to see these Plates, in order that they may observe the variety and beauty of the rupees issued by the **Sūrīs** during the absence of **Humāyūn** from India, and thus obtain an idea of

his wife, Śiva's generative energy being cast into a fire.

³⁰ *Tat-pañchama* is an irregular compound.

³¹ *Udarandhara*, which is not found in the dictionary, is used in the sense of *adarandhara*.

the improvements made by these interlopers.

A good history of the Sūrī Dynasty has yet to be written. In Akbar's time they were not only neglected, but were written against, though most of the improvements in coinage fathered on Akbar may with greater truth claim a Sūrī paternity. Without discussing this question now, I would simply state that for many years before the advent of Bābar rupees had not been coined in Indian mints. The Lōdī Family coined neither silver nor gold, but mixed silver and copper, weighing about 140 grains; some of their coins having as much as 32 grains of silver in them, while others had only a little more than one. How business with such a coinage was ever transacted, I cannot imagine. And, when Bābar came, he went on striking in India the silver *taṅkahs* of Turkistān, each of which weighed about 60 grains. His son Humāyūn followed his example before he was expelled the country, and not until his return did he strike rupees;—only two, however, of which are now known, one of 962 A.H. and one of 963. Akbar again at the commencement of his reign struck the old silver *taṅkahs* introduced by his grandfather. One of them is given by Mr. Thomas, p. 383 of the *Chronicles of the Pathān Kings*, and I have a fuller one, which gives the place of mintage as Lāhōr. These are the only two known. But he must have soon reverted to the custom of the Sūris, as I have full rupees of every year of his reign beginning with 963 A.H., and ending with his 50th Ilāhī year. Thus we see that the rupees reintroduced by Shēr Shāh, became the standard of the Mughal Empire, and also of that of the British Indian Rule.

The rupees depicted in the plates attached to this paper have now become exceedingly

scarce, and are seldom met with in any *bāzār* of the Pañjāb. Lately, during a tour of six months, I obtained but two of Shēr Shāh and two of Islām Shāh. But, by way of compensation, I obtained four rare copper coins of Ibrāhīm Sūr and two of Sikandar Sūr, both of which are extremely rare.

The British Museum has rupees of every year of these kings, and possesses one of Sikandar, a treasure I was never able to obtain. I believe the Madras Museum is the only one in India which possesses a complete set as far as Muḥammad Sūr. No rupee of Ibrāhīm has as yet been found and no gold coin of either Muḥammad or Ibrāhīm or Sikandar has yet been seen. Indeed only one is known of Islām Shāh, and that I found at Amṛitsar some years ago. It is square, and I parted with it to my old friend, Sir Alexander Cunningham.

There is no proper account of the coins of the Sūrī Dynasty, though their copper coins are of great variety and beauty. They were struck all over the south of the Pañjāb and Hindustān proper, and were imitated by Akbar, Jahāngir and Shāh Jahān. Their numbers were so vast that the revenue of the country was estimated in them under the name of *dāms*. I hope some day to give a complete description of these copper coins, as my own cabinet is particularly rich in them, and, as, amongst the 400 coins I lately obtained for Government during my tour, are some very rare specimens.

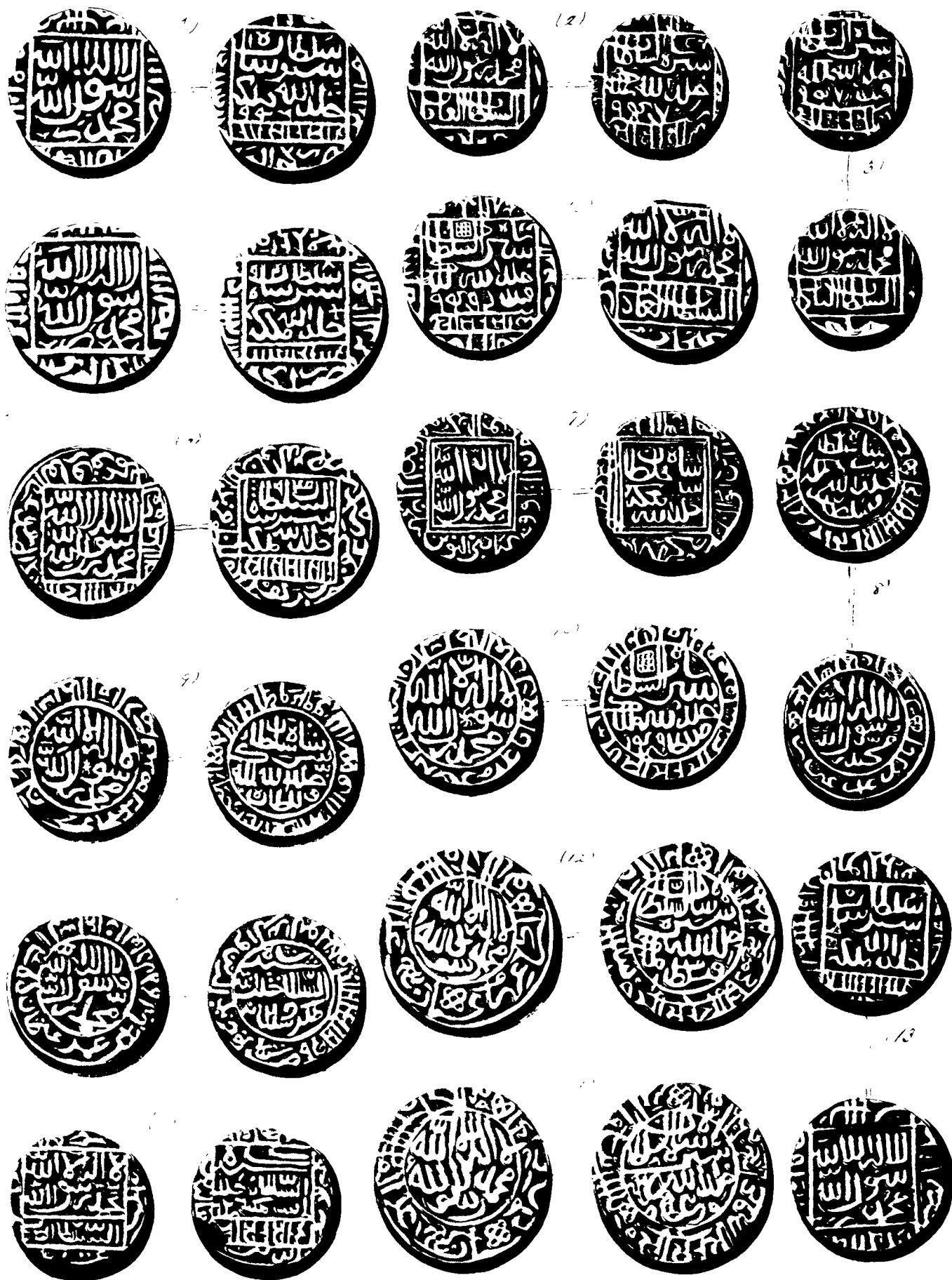
Before sending the rupees now illustrated to Madras, I neglected to weigh them. The weights of them given by Mr. Thomas vary from 163 to 176 grs., and the weights of those I obtained on tour were about 170 grs. each.

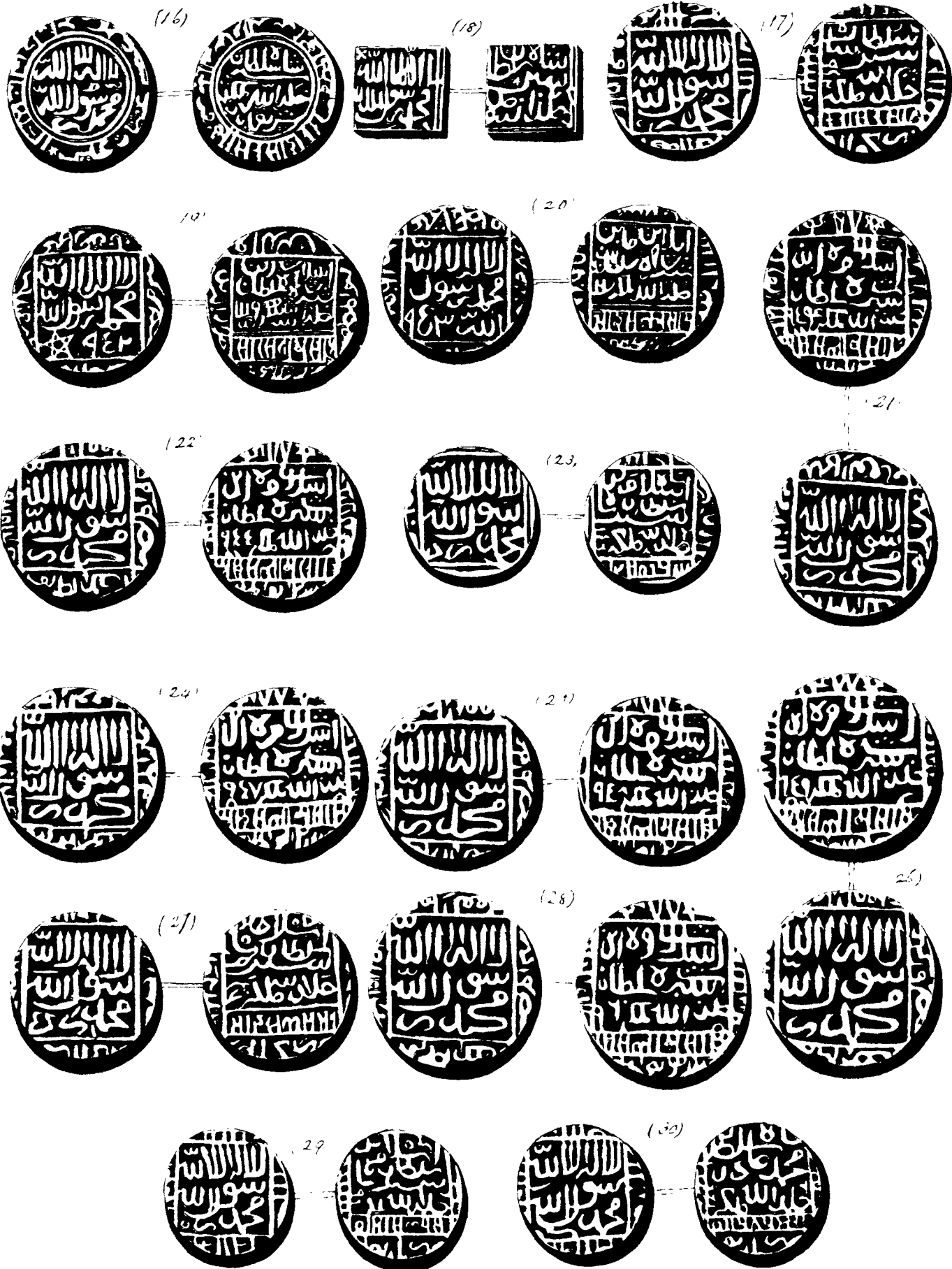
The inscriptions on the rupees as far as they can now be deciphered are as follows:—

(a). SHER SHAH.

- No. 1. *Obverse*: Square area. سلطان خلد الله ملكه ۹۶۶ شير شاه श्री शेर शाह
Margin: ضرب گواليار
Reverse: Square area. The Kalimah.
Margin: Probably names and titles of the four Companions of Muḥammad.
- No. 2. *Obverse*: Square area. Same as in No. 1 but year ۹۶۷ श्री शेर शाह
Margin: Illegible.
Reverse: The Kalimah and السلطان العادل
Margin: Illegible.

- No. 3. *Obverse*: Square area. Same as No. 2 but with **سلطان** added.
Margin: Illegible. **श्री शेर शाह**
Reverse: Same as No. 2.
Margin: Illegible.
- No. 4. *Obverse*: Square area **شیر شاه سلطان خلد الله ملكه ۹۴۸** and name in Hindi.
Margin: **السلطان العادل ابوالمظفر فريد الدين**
Reverse: Square area. The Kalimah.
Margin: Names and titles of the Four Companions of Muhammad.
- No. 5. *Obverse*: **شیر شاه سلطان خلد الله ملكه و سلطان ۹۴۹** name in Hindi. **श्री शेर शाह**
Margin: **فريد الدين ابوالمظفر جهان پناه**
Reverse: Kalimah and **السلطان العادل**
Margin: **عثمان , علي , ابوبكر , عمر**
- No. 6. *Obverse*: Same as No. 4.
Margin: **ابوالمظفر فريد الدين**
Reverse: Kalimah.
Margin: **ابوبكر الصديق , عمر الفاروق , عثمان العفان , علي المرتضى**
- No. 7. *Obverse*: Same as No. 4 in double square.
Margin: **فريد الدين ابوالمظفر صرب شیر گره ۹۴۸**
Reverse: Kalimah in double square.
Margin: Same as 6 but **عثمان ذي النورين** **श्री शेर शाह**
- No. 8. *Obverse*: In circle. Same as in No. 5.
Margin: **فريد الدين ابوالمظفر** **श्री शेर शाह** **۹۴۹**
Reverse: In circle. Kalimah.
Margin: **ابوبكر عمر عثمان علي السلطان العادل**
- No. 9. *Obverse*: In circle. Same as in No. 5.
Margin: Same as in 8 but with one word additional.
Reverse: In circle. Kalimah.
Margin: Names of the Four Companions and **السلطان العادل** and **صرب اجين**
- No. 10. *Obverse*: In circle. Same as No. 5. **۹۴۹**
Margin: **فريد الدين ابوالمظفر جهان پناه** **श्री शेर शाह**
Reverse: In circle. Kalimah.
Margin: Same as No. 8.
- No. 11. *Obverse*: In circle. Same as No. 5. but no date.
Margin: **۹۵۰** **شیر شاه** **فريد الدين ابوالمظفر**
Reverse: In circle. Kalimah.
Margin: Same as in No. 8.
- No. 12. *Obverse*: In circle. Same as in No. 5. but date in margin.
Margin: Same as in No. 11.
Reverse: In circle. Kalimah.
Margin: same as in No. 8.
- No. 13. *Obverse*: In square. Same as No. 1 but date **۹۵۱** name in Hindi.
Margin: Mint obliterated **السلطان العادل ابوالمظفر**
Reverse: Kalimah, in square.
Margin: Names and titles of Four Companions of Muhammad.
- No. 14. *Obverse*: In square. Same as No. 1 and year **۹۴۶** name in Hindi.
Margin: **فريد الدين ابوالمظفر**
Reverse: In square. Kalimah. **السلطان العادل**
Margin: **ابوبكر , عمر , عثمان , علي**





- No. 15. *Obverse and margin*: Same as No. 12 but with year ۹۵۱
Reverse and margin: Exactly the same as No. 12.
 These two rupees, Nos. 12 and 15, are 1.32 inches in diameter. They are much larger than any in the British Museum. It is a pity they have no mint on them.
- No. 16. *Obverse*: In circle (double). شیر شاه سلطان خلد الله ملكه شريف آباد
Margin: श्री शेर शाह ۹۵۱ فريدالديا والدين ابوالمظفر
Reverse: In double. Kalimah.
Margin: Same as No. 8.
- No. 17. *Obverse*: In square. Same as No. 1 but year ۹۵۲
Margin: Same as No. 1; mint *Gwáliár* گوالیار
- No. 18. *Obverse*: Same as in No. 1.
Reverse: Kalimah.
 There are no margins to this coin. I have a strong suspicion that it is of modern manufacture. The square coin in the British Museum is an impudent forgery. There are many gold *nishars* of Shêr Shâh in the market, but they are all forgeries.
- (b). ISLÂM SHÂH.
- No. 19. *Obverse*: In square اسلام شاه ابن شیر شاه سلطان خلد الله ملكه و سلطانه
 श्री इस्लाम शाह
Margin: جلال الدینا والدين ابوالمظفر ضرب سنگانو
Reverse: In square. Kalimah. ۹۵۲ and ✱
Margin: Names and titles of four Companions of Muhammad.
- No. 20. *Obverse and margin*: Same as in 19; same mint. Satgânv.
Reverse and margin: Same as in 19 but year ۹۵۳ and sign omitted.
- Nos. 21, 22, 24, 25, 26, 28 are all of the same type but of years ۹۵۴, ۹۵۵, ۹۵۷, ۹۵۸, ۹۵۹, and ۹۶۰ respectively.
Obverse: In square year, and اسلام شاه ابن شیر شاه سلطان خلد الله ملكه
Margin: In no case legible. But it all reads from the outside. What seems to be ۴۷۷ is I am persuaded not figures, but words, which are followed by a six-rayed star.
Reverse: In square. Kalimah.
Margin: Names and titles of the Four Companions of Muhammad.
- No. 23. *Obverse*: In square. اسلام شاه بن شیر شاه سلطان خلد الله ملكه ۹۵۶
Margins: Obscure, not like Nos. 21, 22, &c.
Reverse: Kalimah. in square.
Margins: Only portions visible.
- No. 27. *Obverse*: Same as No. 23, but year ۹۵۶ in different style of figures.
Margin: Gives ضرب گوالیار
Reverse: In square. Kalimah.
Margins: Very much cut.
- No. 29. *Obverse*: same as in No. 23.
Margin: ضرب نارنول partly visible.
Reverse: In square. Kalimah.
Margin: Same as in No. 27.

(c) MUHAMMAD SHÂH.

- No. 30. *Obverse*: In square. محمود شاه سلطان عادل خلد الله ملكه ۹۶۱
Margin: Obscure, but portions of ضرب نارنول visible.
Reverse: Kalimah, in square. श्री महमद शाह
Margin: illegible.

From a careful perusal of the above coins it will be seen that all conform to **one type**. The name of the king is in the square or circle of the obverse, and is repeated in Nāgarī letters, so that conquerors and conquered might read it. The square coin about whose genuineness I have doubts is the only one without margins, and the rupee of Sikandar has not the name in Nāgarī.

Any one taking up a rupee of the Sūrī dynasty should at once recognize its type; and it is the study of typical coins and inscriptions which enables us at once to assign a coin approximately. I write this because in Major Raverty's translation of the *Tabaqāt-i-Nāsiri* I

find he has been imposed upon by some ignorant native author, who has invented a series of coins of the later **Kings of Ghazni** and of the early **Pathān Sultāns** of Dehli, but who, being ignorant of the **types** of the coins of these kings, has foisted on the learned translator a number of mongrel inscriptions made up of parts of inscriptions on the coins of Aurangzēb and his successors, and a series of titles made up from his own inner consciousness. Strange to say Major Raverty prefers this work to that of the late learned Mr. Thomas! Had he studied the types given by Mr. Thomas he would have escaped being imposed on.

NOTES ON THE GIPSY TRIBES OF THE NORTH-WEST PROVINCES AND OUDH.

BY WILLIAM CROOKE, B.C.S.

The following notes, in which an attempt will be made to bring together a considerable portion of the scattered information we possess as to the **Criminal and Wandering Tribes of the North-West Provinces and Oudh (Avadh)**, will probably prove of interest to the readers of the *Indian Antiquary* in connection with Mr. Grierson's laudable efforts to elucidate the vexed question of **Gipsy Ethnology**.

The first object is to get a workable classification of the more important tribes, and this has been attempted in Captain Dennehy's report contained in the *General Report of the Inspector-General of Police, North-West Provinces, for 1863*. Captain Dennehy divides them into:—

First.—Those who **seldom or never devote themselves to agricultural labour**. Under this head come the Sāsiyās of Sahāranpur, Muzaffarnagar and Bijuôr:—the Dōms or Dōmrās of Gōrakhpur, Bastī and Benares: the Hābūras, Kanjars, and Bhēriyās of the Upper and Central Gangetic Dûāb.

Second.—Those who generally live by robbery and theft, but **sometimes practise husbandry**, such as the Māns or Mānās, or Mainā Mēnās, or Mēwātis, of Rājputānā and some of the Western Districts of the North-West Provinces: the Bauriyās of Mērath, Sahāranpur and Muzaffarnagar: the Badbhaks of several districts: the Jōg's, generally distributed through the Provinces: the Abāriyās

of Ālīgarh, Êtā, Mainpurī and some of the Rōhilkhand Districts: the Bah'liyās of the Central and Lower Dûāb: the Sah'riyās of Bundēlkhand: the Chīrīmārs of Oudh: the Pāsīs of Allahābād, Fatehpur, Oudh and the Eastern Districts generally: the Gaḍḍīs or Gaḍḍiās of the Upper Dûāb: the Bhars of Gōrakhpur and Bastī; the Dōsādhs of the Benares Division: the Gūjars of the Upper Dûāb and Rōhilkhand: the Rāngars of Sahāranpur: the Bilūchīs of Muzaffarnagar; the Sāuvriyās of the Bundēlkhand Districts of Lalitpur, Hamīrpur and the Native States of Tehri and Dattīā; the Avadhiyās of Oudh, Allahabad, Jaunpur, Fatehpur and Hamīrpur: the Pardēsīs of Ālīgarh and Gōrakhpur.

This classification, however, is far from complete and leaves out a number of tribes; but we are as yet very insufficiently acquainted with the connection between the different tribes, and many names are no doubt only local. The Inspector-General of Police in his *Report* for 1867 (page 61) gave as his opinion that "half the thefts in the Provinces are committed by wandering predatory tribes such as Bauriyās, Bah'liyās, Hābūras, Kanjars, Naths, Ghōsīs, Uthaigirās, Sāuvriyās, Barwars and others." The distances to which some of these people extend their depredations is extraordinary, and they have probably increased in recent years, owing to the facilities afforded by the Railways. For instance, in the *Reports* we find cases of Pindāris from Barōdā committing a

mail robbery in Agra;¹ Mēwāris committing five dacoities in Ajmēr;² Saivriyās disposing of their plunder in Bengal.³ Bilūchis from the Mazaffarnagar District were traced to the Bombay Presidency,⁴ while individual Jōgis can be traced from Aligarh to Mirzāpur.⁵ Pardēsis of Gōrākhpur and Dhōlētās of Barēli wander all over India;⁶ and Pardēsis from below Dāmāpur thieve in Mathurā.⁷ Avadhiyās and Kapūriyās of Fatehpur wander all over the Provinces,⁸ and a gang of Hirātī vagabonds appeared in Ajmēr during the famine.⁹ These instances might be almost indefinitely increased.

Captain Denchey remarks in the *Report* above referred to that the Minās, Banriyās, Buddhaks, Jōgis, Ahāriyās, Bahēliyās, Sahēriyās, Chūmārs, Pāsīs, Arukhs, Kanjars, Gudelās, Bhāns and Dōsāds, "commit habitually every kind of dacoity, robbery and theft, which opportunity may throw in their way. To these tribes and frequently, too, to the castes of Ahīrs and Thākurs belong nearly all the gangs of dacoits organised in different localities in the North-West Provinces. The ranks of the professional poisoners are principally recruited from among the Pāsīs, Nāis, Jariyā Lōdhās, Ahīrs and Ahāriyās. The Gūjars and Rāngars, though they occasionally commit dacoities, are ordinarily cattle thieves. The Bilūchis are practised thieves, and commit offences in the guise of men-deceits (*jaqirs*) or medicine-men (*hakims*). The Saivriyās and Avadhiyās never join in crimes of violence." The last North-West Provinces Census figures are not satisfactory for this class of the population, as will appear from subsequent notes.

Ahāriyās—these are a leading criminal class in the Central Jumnā-Gangetic Dûāb and the adjoining Rōhilkhand Districts. They do not appear separately in the Census returns, and are probably included in the Ahārs, who number 257,670 souls, as compared with only 104,159 shown in the previous enumeration. They are found principally in Aligarh (13,014, Êtā (2,225) Murālabād (37,395), Budāūn (133,085), Barēli (47,366), Pilibhīt (13,259), Tarāi (2,393), but are practically non-existent in the rest of the Pro-

vinces. In the Central Dûāb most of them hold land as a means for concealing bad livelihood. They very seldom commit offences near home, but absent themselves for months at a time on plundering expeditions, and visit for that purpose the Panjāb and even go as far as Bengal. They are expert burglars, and occasionally form dacoit gangs. In former times horse-stealing was one of their specialties, but this has been practically suppressed.¹⁰

Ahīrs—(Sanskrit Abhīra, a cowherd). The Ahīrs according to the last Census number 3,584,155, and are generally distributed all over the North-West Provinces. Their numbers by revenue divisions are Mērāth (46,983), Agra (430,933), Rōhilkhand (91,460), Allahābād (589,124), Banāras (1,176,593), Jhānsī (61,476), Lakhnau (271,251), Sitāpur (229,150), Faizābād (353,730), Rāe-Barēli (331,381). They are divided into three great tribes—Nandbāns, Jadbāns (Yādūbāns) and Gwālībāns. In the Western Districts they follow the custom of the Jāts and Gūjars as regards the re-marriage of elder brothers' widows, but this is not the case in the Central Dûāb. "In the Delhi territory the Ahīrs eat, drink, and smoke in common not only with Jāts and Gūjars, but also under a few restrictions with Rājputs. In other places Rājputs would indignantly repudiate all connection with Ahīrs."¹¹ Their special occupation is cattle-breeding and dairy-farming, and their distinctive crime is cattle-stealing, but as a whole the caste has a bad reputation. They are not nomadic in their habits, and do not seem to wander far from home for purposes of crime. The Ahīrs of Gōrākhpur are always ready to join in crimes of violence,¹² and are noted cattle-thieves in the Tarāi.¹³ The Ghāzīpur Ahīrs make cattle-lifting excursions into Mirzāpur,¹⁴ and the old *Nizāmat Adalat Reports* abound with references to their doings—e.g., a professional poisoner described himself as an Ahīr of Farrukhābād (*Bhawanī*, 19th June 1852.) A band of Mainpurī Ahīrs disputed about cattle-theft, killed one man and wounded another with swords (*Khumān Singh*, 2nd December 1852.) A number of Mērāth Ahīrs attacked a party of Gūjars who had tracked

¹ Inspector-General's *Report*, p. 20.

² *op. cit.* p. 54.

³ *op. cit.* 1868, p. 6.

⁴ *op. cit. loc. cit.*

⁵ *op. cit. loc. cit.*

⁶ *op. cit.* p. 42.

⁷ *op. cit.* p. 93.

⁸ *op. cit. loc. cit.*

⁹ *op. cit.* p. 28.

¹⁰ *op. cit.* 1869, p. 54.

¹¹ *Police Report*, 1867, p. 29.

¹² Sir H. M. Elliot, *Glossary*, &c.

¹³ Inspector-General *Police*, 1868, p. 166.

¹⁴ *op. cit.* 1871, p. 96.

¹⁵ *op. cit.* 1870, p. 82 B.

stolen cattle to their village and wished to search (*Mehrā*, 31st December 1852.) An Ahir widow of Farrukhābād murdered her illegitimate child (*Musamāt Sarjī*, 30th June 1852.) A party of Ahirs of Ghāzīpur killed the seducer of one of their relations (*Hansrāj*, 27 Oct 1852.) An Ahirin kidnapped a Brāhman's daughter (*Musamāt Shēekari*, 17th Dec. 1852.) An Ahir was guilty of a cold-blooded murder deliberately planned and deliberately executed, probably through intrigue (*Shēekari*, 23rd May 1853.)

Baddhiks, Baddhaks—(Skr. Vyādha, one who strikes) also known as Siyār-marwās or neck-killers. They bore an evil reputation as *fiends* and dacoits in Oudh and the adjoining districts of the North-West Provinces, and a number of them were colonized some years ago near Gōrākhpur, but without much success. Their specialty is disguising themselves as Brāhmins and Bairāgis and associating with pilgrims coming from the Ganges. They perform the *āchā* ceremony and mix *dhātūrā* in the sacred food (*parshād*), and have been known to put up a shrine as *jugīs* and instruct disciples (*chēlīs*).¹² They have a slang *argot* like the Dōmrās. The Gōrākhpur Baddhaks still not infrequently absent themselves from the settlement, and a few years ago their specialty used to be illicit distilling.

Banjārās—(Skr. Vanījakāra, a trader). They pervade the North-West Provinces, and used to be the great grain-carriers of the country, but this trade has almost disappeared since the introduction of railways. They have their chief habitat in the districts along the Nēpāl border. In Gōrākhpur some of the Bhārs are known as Banjārās.¹³ They are said in some places to worship a famous bandit, who was killed in one notorious way, but of this there is no distinct information. The Banjārās of the Central Ganges Jammā Dū d are a wild class, wear their hair long, use bright-coloured clothes and look something like Kabulis, and are apparently non-Āryan in origin. They are fond of a peculiar kind of gold-carring and have a great taste for wearing jewellery generally. Their chief business is cattle-dealing, and they drive round about harvest-time large

herds of oxen which they sell on credit to cultivators. They take no bonds and hardly ever go into the courts, but their appearance and manner are so rough and awe-inspiring that they collect their debts by personally visiting their creditors, and are generally paid punctually. The women do a curious kind of embroidery in coloured wools mixed up with cowries. On the whole they are a violent people, and are specially complained of in the Étāwā District.¹⁴ A case is reported in which a number of kidnapped children were found in one of their camps in Étāwā.¹⁵ Similarly some of them kidnapped a girl in Ajm'r for sale to some wealthy banker.¹⁶ In the old *Nizāmat Adālat Reports* a Banjārā kidnapped a boy aged 10, the son of another Banjārā (*Bhāgī*, 2nd November 1852.) A Banjārā murdered his brother because he reproved him for idleness (*Mohrā*, 20th September 1852). Some Banjārās' cattle got mixed with those of some villagers, and they attacked the herdsmen, killing one of them (*Hārāj*, 18th August 1853).

In Gōrākhpur Banjārās are commonly known as Nāiks, which is properly the name for the leader of one of their gangs (Skr. *nāyaka*, a leader.) Sir H. M. Elliot gives a detail of the sub-divisions of the tribe in his *Glossary*.

Major Gunthorpe in his *Notes on Criminal Tribes in Berar* remarks that the Matturiyā and Lubhānā division of the tribe confine themselves to cattle-lifting and kidnapping. The Matturiyās wear the *janū* or sacred thread, and the women a blue *sārī* or sheet. The married women wear their hair tied up in a peculiar knot on the top of the head and fixed there by a button. This is also the case with the women in the North-West Provinces, but they usually wear a sort of small stick stuck perpendicularly into the hair on the crown of the head. The sheet (*sārī*) is draped over this, and gives them a very remarkable appearance. Major Gunthorpe says the difference between the Lubhānā and Chāran sub-division of the tribe is that the women of the former wear the sheet (*sārī*) and those of the latter the petticoat (*lahngā*). He gives an elaborate and interesting account of the various means by which they commit dacoities and robberies.

¹² See Capt. Donnelly's *Report* of 1869, p. 121-122.

¹³ Capt. Donnelly's *Report* in the *Police Reports* of 1875, p. 112.

¹⁴ Inspector-General of Police N.W.P., 1878, p. 1.

¹⁵ *Police Report* 1871, p. 17 A.

¹⁶ *Ibid.* 1870, p. 99 B.

but none of his remarks appear to apply to the tribe in the northern part of India.

Bāwariyās or Bauriyās.—These are one of the most notorious predatory tribes in the North-West provinces. Mr. Ibbetson²⁰ derives their name from the *bāwā* or noose with which they catch animals. They would thus be analogous to the Pasīs who take their name from the noose (Skr. *pāśa*) which they use in climbing toddy trees (*tāṭ*). The true habitat of the Bauriyās is in the western part of the North-West Provinces and the eastern districts of the Pāñjab, but they wander immense distances on predatory incursions. An unsuccessful attempt to colonise them has been made in the Muzaffarnagar District. In their raids they very commonly assume the garb of *jaqīrs*. I was present at the search of a camp in Muzaffarnagar, when with them were found the complete apparatus of a *jaqīr*: small brass images, fire tongs, mud-coloured clothes, etc., such as are worn by the common *jaqīrs*. The best way of detecting them when disguised is by a necklace of peculiar shaped wooden beads which they all wear, as well as gold pins which they have fixed in their front teeth. Should this fail their mouths should be examined, for under their tongues a hollow is formed by constant pressure from their younger days, in which they can secure from fifteen to twenty silver *four-ānā* or two-*ānā* pieces. They are so accustomed to this that they often evade search for money when admitted into jail, and the coins thus concealed do not interfere much with their power of speech. Captain Dennehy says²¹ that they do not worship any deities of the Hindu pantheon, but in Muzaffarnagar they certainly employ Brāhmac family-priests at marriages, etc. They are very troublesome in the Fatchpur District, where they are said to be all thieves.²² A case is there quoted of a gang of Bauriyās in the service of some Thākurs committing a dacoity in Ajmur. Seven of them were arrested. In the course of the enquiry sixteen other cases of robbery, burglary and theft came out, and the stolen property was recovered.²³ The Thākurs of Murwār are said to keep Bauriyās in their pay and share in the spoil.²⁴ The *Nizāmat Adalat Reports* swarm with records of

their doings. For instance, we have a case of an organised burglary planned by certain *chāndāddās* of the Bauriyā caste and worked out by others who concealed their knowledge of the offenders and received a share of the proceeds (*Main and others*, 12th January 1852). A gang of fifteen Bauriyās were convicted at Mērah of wandering about the country disguised as Bairāgis and committing theft (*G. L. Zaidi and others*, 26th September 1851). Recently a gang went from Muzaffarnagar to Barōdā and carried off an immense quantity of jewellery belonging to one of the Gaikwar's ladies, and quite lately a gang robbed a Nēpālese General, who came down from the hills, of a large sum in cash and notes. The **Gidhiyās** of the Bijnôr District, another gang with a very evil reputation, are said to be closely connected with them, but this is probably incorrect, as the *Gidhiyās* are more likely to be an offshoot of the great **Kanjar** tribe of the Upper Ganges—Jamnâ Dâb.

Bēriyās or Bhēriyās are a tribe of nomads found in the Central and Lower Gangetic Dâb. They live in gangs in rude grass or thatched huts. They are very closely connected in manners, character, and physique with the main **Habūrā** tribe, of which they are possibly only an offshoot. They profess to live by begging and the prostitution of their women, who are taught to dance and sing in a rude way. They really subsist by petty thefts, principally of grain at harvest-time, but they sometimes, when hard pressed, commit more violent crime. Curiously enough many of their gangs are under the leadership of women. Their great meeting-place is on the mounds which mark the site of an extensive ruined city at Nōhkhēn, in Parganā Jal sar of the Etā District. They assemble there in great numbers in the rains and hold *parichāyats*, at which all cast business, marriages, etc., are managed. What historical connection they have with the place is a curious question, which I have been unable to investigate satisfactorily. Like all these tribes they have a regular *gajra*, when they are very careful in concealing. The women particularly have a very peculiar look. They have the small, black, bright eye and the restless expression which is

²⁰ *Panjab History and Soc.* 575.

²¹ *Report* 1868, p. 112.

²² *Report* 1868, p. 112.

²³ *Report* 1868, p. 112. ²⁴ *Report* 1868, p. 112.

so characteristic of the aboriginal races. The *Reports* do not notice them much, as they have probably been confounded with the Hābārās.

Bilūchis or Rinds.—Major Davis in the *Police Report* of 1867²¹ thus speaks of these people—"So far as they have come under the surveillance of the police they are residents of the Muzaffarnagar District. They are by caste Mahomedans and, numbering about sixty men, inhabit some seven towns or villages in that district. They originally emigrated from the Panjāb. That they are professional thieves of a dangerous character is now well established. They depart on their predatory tours assuming the character of *chifis*, physicians of medicine, and teachers of the *Qurān*, and carry on their depredations at great distances as far southward as Ajmēr and westward as Lohōr. Some few in the Muzaffarnagar District have acquired landed property, but the rest may be said to have no ostensible means of livelihood, and to be habitual absentees. Their mode of robbery is not by violence, but by picking pockets by means of needles. A house is generally selected, the owner of which is absent. One thief makes an entry, receiving two-thirds of the property as his share, while his confederate, who sits outside to watch, receives one-third." Mr. H. B. Sanson²² calls them Bilūchī, and says:—"They give their tribal names as Rind, Lāshārī, Javī and Kōrū." They are found chiefly in Ambala and Karnāl. They are described as coarse men of a dark colour, living in a separate quarter and with nothing to distinguish them from the scavenger-class except a possession of stolen ornaments and similar property. They say that their ancestors once lived beyond Kasūr in the Lohōr District and were driven out on account of their predatory habits. The men still keep camels, and cultivate a little land as their ostensible occupation, but during a great part of the year they leave the women, who are strictly secluded, at home, and wander about disguised as *jaṭīs* or as butchers, in search of sheep for sale, extending their excursions to great distances and apparently to almost all parts of India."

Binds.—These are a tribe mainly found in Gwākhōr. In the Census returns they are

apparently mixed up with the Bhārs, whom they greatly resemble.

Dhōlērās.—This tribe infests the Barh District. They do not appear in the Census, as they are probably included among the fishermen and boatmen (*Mallāh*). The *Police Report* for 1868²³ says that "the *Pardāsīs* of Gwākhōr and Dhōlērās of Barh District are soldiers of a like kind to the *Jōgis* of Aligāh, and their wanderings would seem to extend over the whole of India. A good account of them is given by Mr. Kayverr in the *Report* for 1869.²⁴ He describes them as traditionally immigrants from the Dakkan. They seem to have settled in what is now the Barh District more than 100 years ago. They are of the Mallāh class, but consider themselves a degree above the rest of their brethren, and never wash the dishes of their employers like the Kāhār Mallāhs. They are said to be called *Dhōlērās*, *Dulērās* or *Dalērās* because they make tamarisk (*Chhāl*) baskets (*dhōl*). They steal by day and never by night, like the *Uthāgīrās* or pick-pocket class. They go out in parties (*chhāl*), and encamp each party being under a *moṭṭhān* or headman. They remain separately encamped till the omens (*chhān*) are auspicious: a good omen being to see a single jackal in the evening, but if two are seen together it signifies ill-luck, and they break up their camp and come home. When the omen is propitious a goat is offered to the god Ganyā Dāmī (?) and then each party, informing the others of the District which it has chosen for thieving, moves off. Formerly they used to infest Ondh, but now they confine themselves to the North-West Provinces. Very few are ever convicted. They generally go to a fair, and the men dress themselves as Brahmins or Thākurs. Their custom is to keep an owner of property engaged, while a boy steals, and if the lad is caught he never gives his correct name or address. The thief gets a double share of the stolen property, but most of the gains are spent in drink. If a boy is caught, the well-dressed Dulērās of the party intercede for him and try to get him off. They often get up a quarrel in a *bāḍā* to give a boy a chance of robbing something. The *Police Report* of 1870²⁵ records the conviction of 71 of

²¹ pp. 94-95.

²² *P. J. C. L. B.* 1872, p. 57-4.

²³ p. 115.

²⁴ p. 126-127.

²⁵ p. 126-127.

the caste in Barēli for belonging to a gang of thieves.

Dōms or Dōmrās.—This is a very curious apparently aboriginal caste and will require some space. The Census figures give the distribution of the castes as follows, by Commissioner's Divisions:—Mêrath 99, Agrā 120, Rōhilkhand 44, Allahābad 53, Benares 11,814, Jhānsī *nil*, Kumāūn 157,042, Lakhnau 2,504, Sītāpur *nil*, Faizābād 1,060, Rāe Barēli 3,879; Total 176,615. The districts which record more than 1,000 of them are Āzamgarh (1349) Benares (1217) Ghāzipur (1873) Gōrākhpur (5951) Almōrā (104,936) Garhwāl (52060) Bārābankī (2367) Rāe Barēli (3879). They thus fall into two great divisions:—the **Eastern Dōms** found in Gōrākhpur and the neighbouring districts of the Benares Division; and the **Western or Hill Dōms** who are enormously in excess of their eastern brethren.

They are in fact apparently two distinct tribes. The **Eastern Dōms** have a very evil reputation, while the **Hill Dōms** though menials, are apparently, as a rule, respectable people. It has been suggested with much probability that the word **Dōm** or **Dōmrā** is radically the same as the **Romani** of Europe, *d* and *r* being interchangeable. If this be true they would be the main basis of the **Gipsies** of Europe. Mr. G. A. Grierson's analysis of their *angol* seems to tend towards the same result. What is possibly a third subdivision of the caste is the **Dūm** or **Dōm Mirāsīs**, who are professional musicians. Mr. Ibbetson²⁰ says the **Dūm** and **Mirāsī** must be carefully distinguished "from the **Dōm** or **Dōmrā**, the executioner and corpse-burner of Hindustān, and the type of all uncleanness to a Hindu; as also from the **Dūm** of the Hill States, whom I have classed as **Dūmnā** and not as **Mirāsī**, as I understand that the word **Dūm** is there applied to workers in bamboo. The class is distributed throughout the North-West Provinces, but is most numerous in the Amrātsar, Lahōr, Rāwāl Pindī and Multān divisions of the Panjāb, and in Bahāwalpur and the other States which march with them. Their social position, as of all the minstrel castes, is exceedingly low, but they attend at weddings and on similar occasions

to recite genealogies. Moreover there are grades even among the **Mirāsīs**. The out-cast tribes have their **Mirāsīs**, who, though they do not eat with their clients and merely render them professional service, are considered impure by the **Mirāsīs** of the higher castes. The **Mirāsī** is generally an hereditary servant like the **Bhāt**, and is notorious for his exactions, which he makes under the threat of lampooning the ancestors of him from whom he demands fees." "These four were not born on giving day—the Mullah, the Bhāt, the Brahman, and the Dūm." "The **Mirāsī** is almost always a Mussalmān."

Passing on to the Eastern Dōms,—they have, like many of these servile castes, a tradition of Rājput descent. W. Buchanan²¹ says of them—"The **Dōmrās** who work in bamboos have disgraced themselves not only by their inordinate appetite, for they will eat food prepared by anyone except a washerman, but by removing dead carcasses and by being public executioners, while their women do not scruple to confess that they drink spirituous liquors. They are very few in number (76 families). Many allege that they were once lords of the country and that the **Dōmkatār** tribe of military **Brāhmans** are not in reality different, but abandoned their napurity when raised to the military rank by Mahananda." At any rate, as Sir H. M. Elliot remarks²² it is curious that the names of many old forts such as Dōmdihā and Dōmānāgh testify to their former importance.²³ He also remarks that there are several **Dōms** or **Dōmrās** scattered over the western districts of the North-West Provinces and in Bundelkhand and Sagar, who are engaged in the menial occupations of making ropes, fans, mats, and such-like articles. In Oudh the term **Dōm** is applied to sweepers, as **Bhāṅṅ**²⁴ and **Chūṅṅ**²⁵ are elsewhere." In the *North-West Provinces Gazetteer*, Bastī District,²⁶ I gave a tolerably full account of the tribe, with a vocabulary of their *angol*, which those interested in such matters can consult. Specially the most curious point about the Gōrākhpur Dōms is that, though a regular bangle to be, they have no aptitude for sport of any kind, and do not seem to use the flesh of wild animals at all. All these Eastern Dōms are collectively

²⁰ Panjāb Ethnography, p. 152.

²¹ *Eastern India*, Vol. II. 471.

²² *Gleanings in Europe*.

²³ p. 629.

²⁴ See also *ibid.* Vol. XI p. 9ff.

classed as **Maṅghaiyā** or residents of the ancient Magadha kingdom. There are also many sub-divisions of them, but many of these are by a process of fission rising to the dignity of new castes, because of course no one when he arrives at any degree of respectability cares to be called a **Ḍôm**. Such are the **Kāsiwālās**, who are the most respectable of all. Their special business is setting light to funeral pyres, and many have thereby realised much wealth. They are supposed to have been deputed for that purpose from Kāśījī (Benares): hence their name. The men of this sub-division think it a disgrace to set fire to brick kilns. Next come the **Bānwāds**, who are makers of rope from the *ba* fibre. And the **Hēlās**, most of whom are Muhammadans and do regular sweepers' work. The **Bāṁsphōrs** or "bamboo breakers" use a particular kind of knife called *bāṁk* or *jhālā*, and make thatches like the **Gharāmīs** of other parts. **Bāṁsbinwās** or "bamboo weavers" make bamboo baskets. The **Dharkārs** make fly-nets (*chog*), stools (*moṛghā*), &c.; they act as musicians at weddings, where they blow long horns called *singhā*. The **Pattaris** make the leaf dishes (*ṭattarī* or *ḍanna*) used at marriages and by poor people. The **Halākhōrs** or "foul eaters," are executioners and scavengers.

Of the **Hill Ḍôms** the best account I am acquainted with is contained in Mr. E. T. Atkinson's *Himalayan Gazetteer*, Vol. II. p. 379. He says, "they are correctly enough supposed to be remnants of the original inhabitants. They are of exceedingly dark complexion as a rule, but not more so than the tribe of the same name in the plains and many Chamārs. They have for ages been the slaves of the **Khāsiyās**, and been thought less of than the cattle, and with them changed hands from master to master. It was death for a **Ḍôm** to infringe the restrictions of caste laid down by the Hindu laws, such as knowingly making use of a *bauppi*, or any other utensil belonging to a Rājpūt or Brāhman. Even the wild **Rāji** considered the presence of the **Ḍôm** a source of defilement. The **Ḍôms** are divided into a number of classes: chiefly according to occupation like the Chamārs of the plains.

In the extreme west we find them on the right bank of the Indus, living in villages apart from the people, and filling the same servile occupations. In Yāsin, Nagar, and Chīlās, they are very numerous, and are of a very dark complexion, coarse features and inferior physique. They are found again in the same position among the Āryans of Kāśmīr and among the Dōgrās of Jammūn. Here again they are noticed for their dark complexion, which unmistakably marks them out from the light-complexioned Āryans. They are smaller in limb, stout, square-built, and less bearded, and altogether exhibit a much lower type of face which centuries of serfdom and oppression have not tended to modify. The **Dhiyārs** or ore-smelters of Jammūn, corresponding to the **Agūris** of these hills and the **Bātals** of the Kāśmīr Valley who are carriers and musicians and correspond to the **Harkiyās** of Kumāūn, should be assigned to the same class. The **Bēms** of Ladākh occupy a similar position, and are blacksmiths and musicians. In Kunāur and Kullū we have them again following the same trades, classed with a tribe of similar occupations called **Kōhlīs** by the people of the lower hills, **Chamārs** about Rāmpūr on the Satluj and by themselves and the Kunāurīs **Chamangs**. The same remark is made about them here, that they are darker than the Kunāurīs round them. The smiths are called **Ḍômang** in Kunāurī and the carpenters are termed **Ōrās**, and both equally with the **Kōhlīs** considered of impure caste. In Nēpāl these helot craftsmen are represented by the **Nēwārs**. Sufficient has been said to show that these **Ḍôms** in the Hills are not a local race peculiar to Kumāūn, but the remains of an aboriginal tribe conquered and enslaved by the immigrant Khāsiyās."

The specific crimes of the **Eastern Ḍôms** are dacoity, robbery, theft, and illicit distillation of spirits. The **Hill Ḍôms** appear to be greatly addicted to kidnapping children."

Dôsād or Dūsād.—They do not find a place in the Census. Their habitat is the Eastern Districts of the North-West Provinces, particularly Ghāzīpūr, where they are said to number more than 20,000.⁵⁵ They seem to be an off-

⁵⁵ See *Report of the Inspector-General of Police, 1870* p. 12 B, and the case of *Kaṁkūghā, Nizamat Adalat*

Report, 9th October 1852

⁵⁶ *Report of Inspector-General of Police, 1870*, p. 86 B.

shoot of the Chamârs. and act as grooms in the Pañjâb Military Cantonments.³⁷ They are the ordinary labouring classes in Bihâr, and are almost invariably *chaukilârs* or village watchmen, although notorious for their own criminal propensities. They are a very useful caste, as they do any kind of work. Many are table-servants, cooks, bearers and grass-cutters to Europeans.³⁸ Dr. Buchanan Hamilton thinks they are the same as the *Chandâls* of Lower Bengal.

Ghôsis are akin to the *Ahîrs*. They are literally the "shouting caste" (Skr. *ghôṣha*) because their occupation is driving cattle. They are generally Muhammadans: while the term *gwâlâ* is usually confined to Hindu cowherds. Ibbetson³⁹ says that Hindus do not object to buy milk from them unless it is watered, as they cannot take water from their hands. The *Ghôsis* of Bhadwas and Mahrâ of the Etâ District had a bad reputation for horse stealing, which has been now put down.⁴⁰

FOLKLORE IN WESTERN INDIA.

BY PUTLIBAI D. H. WADIA.

No. XI.—*The Two Brothers.*

There was once a great *Râjâ*, who lived very happily with his wife and two sons. The two boys were very dutiful and lovable little creatures, and their parents were extremely fond of them. But unfortunately it happened that when they were scarcely seven or eight years old, the queen, their mother, began to show symptoms of a fatal malady. The *Râjâ* did all in his power to restore her to health, but in vain. So at last he was advised by his physicians to remove her to a summer palace belonging to him, which was situated in a remote part of his dominions and enjoyed a congenial and salubrious climate.

Now the windows of the queen's apartment in that palace looked into the garden, and each day as she lay in her bed she observed a pair of sparrows chirping and twittering amongst the leaves of a tree in which they had their nest, and carrying grains of corn for their little ones in it. It made the poor invalid happy to see the wee little things being taken so much care of, for it took her thoughts to her own dear little boys whom she made so much of; but sorrow filled her heart the next instant when it struck her that one day she herself might be taken from them and they might be left without the loving care and comforting hand of their mother.

This went on for some time, till one day the queen was deeply moved to see the hen-sparrow grow sick and die in a neighbouring bush, leaving the poor cock in the wildest grief and the little ones wondering why she did not

come to them so long. The queen felt much for the little ones, and used to scatter seeds from her window to enable the poor stricken cock-sparrow to pick them up for his motherless brood.

And thus it was for some time, till one day another hen-sparrow appeared upon the scene and began to build another nest hard by; and then commenced a trying time for the nestlings, for this hen, who seemed to have taken the place of their mother, grew so jealous of the love the cock-sparrow lavished upon them, that she would not so much as allow him to procure them their food, and took every opportunity to peck at them with her beak and to hustle them about. By degrees the cock-sparrow, too, learned to regard them with disfavour, and joined his new mate in ill-treating them in various ways. On one occasion the hen-sparrow's jealousy rose to such a pitch that both she and the cock pulled out the feathers of the poor motherless birds, and finally threw them out of the nest down on to the ground. The queen, who had been watching all this with the keenest interest and the greatest grief, burst into tears at the thought that her own boys would one day share the same fate as the little birds, should death remove her from them, as from the nature of her malady she knew it soon must. The king, who happened to be near at the time, inquired into the cause of her grief, whereupon she told him the whole history of the feathered family, and added that she feared her own dear boys would meet with a similar

³⁷ Ibbetson, *Pañjâb Ethnography*, 4e. 605.

³⁸ Hunter, *Statistical Account of Bengal*, xi. 252.

³⁹ para. 479.

⁴⁰ *Report of the Inspector-General of Police, N. W. P.* 1867, p. 29.

fate after her death. The king soothed her to the best of his power, and expressed a hope that she would long be spared to her children; but the Rānī was inconsolable, and wanted the king to give her a solemn promise that if ever he married a second wife after her death he would not allow her to ill-treat his sons. In vain the king assured her that he was determined not to marry a second wife and give the boys a step-mother, but the queen would not believe him, saying that she knew better, and that his position in life required that he must have some one to share the throne with him. She entreated him, therefore, to select a good-tempered and kind-hearted woman for his second wife, and to keep her sons as independent of her as possible. The king promised to do all that she desired, and soothed her by kind words and soft entreaties to take heart, and hope for a speedy recovery.

After this the queen's illness took a turn for the worse, and in a short time **she closed her eyes for ever** with her dear little boys weeping on her breast.

The Rājā was sorely grieved at this, and sought by every means in his power both to comfort his motherless sons and to promote their happiness. He kept them constantly by his side, and spared no pains to make them contented with their lot and forget their mother's loss.

This happy state of things, however, did not last long: for in a couple of years' time the courtiers began to impress upon the king's mind the advisability of a second marriage, so that he was at last persuaded to listen to them and **marry the daughter of a neighbouring Rājā.**

As soon as the new queen was installed into the palace she began to **look with displeasure** at the hold the young Princes had on the king's heart, and her displeasure soon ripened into jealousy. She objected so strongly to the boys being constantly in his company that the king had to ask them to avoid being seen with him so often. The boys, who were well beyond their years, soon saw the awkward position in which their father was placed, and did their best to keep themselves as much out of their **step-mother's way** as possible. But still the wicked woman went on finding fault with them in one way or other, and kept

bothering the king with a thousand complaints about them, so that he became tired of them and it struck him that perhaps he himself had been spoiling the boys with over-indulgence, and with this idea he too began to ill-treat the poor little princes.

One day it happened that the queen was out in the garden by herself enjoying the fresh air and the charming scenery, when suddenly a **ball studded all over with diamonds and pearls** came rolling up to her feet. She guessed at once that the ball could belong to nobody save her own step-sons, for they alone could afford such costly play-things, and was going to pick it up, when the eldest of the two boys jumped over the wall into the garden and running up to where the queen was sitting took up the ball and ran away with it at full speed. But as soon as he turned his back on her the queen gave a loud scream, and began to weep bitterly, to tear her hair, and to rend her clothes, so that the attendants went running up to her to learn the cause of her grief, and, in reply to their enquiries, she told them that she had been grossly insulted by her eldest step-son. They soon took her into the palace and there **she told the king such a black story against his eldest son** that in his wrath he began to rave like a madman, and swore that he would never look upon both the boys' faces as long as he lived, and gave orders that they should that very instant be **driven out of the palace.** But the queen would not be pacified even with this, and threatened to poison herself if the king did not that very moment pass sentence of death upon both his sons. The king thereupon issued orders to his chief executioner to take the two boys away to some dense forest and, **after putting out their eyes,** to leave them there to be devoured by wild beasts; and further commanded at the queen's suggestion that their eyes be brought before him as a proof that the cruel sentence had been put into execution.

The executioner, who was an old man, took the poor boys into his custody and set out with them towards a dense forest. But all the way there the young princes entreated him to have pity on them and not deprive them of their eyes; and they pleaded so sweetly for mercy that even the hard heart of the executioner

melted, and he promised that he would not hurt a single hair of their heads.

At this the boys fell at the old man's feet and thanked him for his kindness with hearts full of gratitude. The executioner, however, was at a loss to think where he could procure two pairs of eyes to lay before the queen in place of theirs, for he dared not return without them; so the three hit upon a plan by which to deceive the wicked queen.

They took their bows and arrows and **killed a couple of wild fawns**, and plucking out their eyes tied them up, dripping with blood, in a handkerchief. The executioner then bade the princes be of good cheer and went back towards the palace with the bundle containing **the eyes in his hand**. As soon as he was gone the two brothers, overcome with grief and fatigue, went to sleep under a large tree. When they awoke the next morning they felt very thirsty and looked about them for water, but there was none to be had on the spot. So the eldest boy said:—

"Sit here a while, my brother, under this tree, while I go to some other part of the forest and get you some water to drink, and, if possible, some wild fruits or roots for food, for as we have been fasting so long, you must be feeling very hungry."

The little boy agreed to this, and sat down under the tree. He waited there for a very long time, but his brother did not turn up, and at last he began to fear that his dear brother had been devoured by some wild beast, when all at once he distinctly heard voices over his head. He looked up and saw that a **chakvā** and a **chakvī**,¹ who were perched upon one of the branches of the tree, were talking to each other like human beings.

"You may pride yourself as much as you please, Chakvī," the **chakvā** was saying, "upon the **medicinal properties of your feathers**; but you could show nothing to equal certain properties I possess."

"Oh, indeed!" replied the **chakvī**, "pray what is it that is so marvellous about you? Would you not tell me?"

"Well," said the **chakvā**, "I would never have spoken of it, but I break silence for this once, Chakvī, since you are so eager to know of it, but pray don't tell any one about it."

"No, I shan't," returned the **chakvī**, and the **chakvā** resumed.—"The man who **eats my head** will the next day be crowned king, whereas he who **eats my liver** will have twelve years of weary travelling and wandering about for his pains, but will attain immense happiness at the end of that period."

The bird had hardly spoken these words when up went an arrow from the bow of the young prince lying underneath and down fell the poor **chakvā** gasping for breath!

"So much for your boasting!" cried the **chakvī** in distress and flew away. The young prince soon pulled out the poor bird's feathers, and gathering a few sticks together, lighted a brisk fire and roasted the little bird over it, meaning to share it with his brother on his return. Being hungry, however, he did not wait for his brother to come up, but dividing the bird into two parts, he put aside the fore-part with the head for his brother and ate the rest, liver and all, himself; for he thought that if ever the bird's words came true, he would much rather have his eldest brother to be king than himself.

Shortly after the eldest prince returned with some water, having failed to procure anything for food. So his brother gave him the head and shoulders of the bird to eat, and told him the whole story of the **chakvā** and the **chakvī**, and the two brothers laughed and jested over it for some time and then fell fast asleep.

The next morning when they awoke they felt very hungry, the youngest especially feeling so weak for want of food as not to be able to rise from the ground on which he was lying. Upon this the elder brother said:—

"I shall go and make another attempt to find food. I have plenty of gold in my pocket, only I do not know where to buy food with it." So saying he set out at full speed and went straight on till he came within sight of a large city. He made towards it with all haste, but found that as it was very early in the morning the gates of the city had not been opened. So tired and hungry he sat upon a stone and waited. At sunrise the gates were opened, and he at once walked in through them; but what was his surprise and consternation to find himself surrounded by armed men, who took him rather gruffly by the arms

¹ See *ante*, Vol. X. p. 82, footnote.

and said, "Come along, young man, since it has been your lot to be the first to enter these gates this morning we must take you to the queen and see what follows." And so they gave him a horse to ride and escorted him with great haste towards the queen's palace.

Now the reason of this mysterious behaviour on the part of the guards was that the king of the country had recently died without an heir, and the court astrologers had predicted that the heir to the throne would be the first to enter the gates of the city the day after the king's death, and that the sacred court elephant would of its own accord throw a garland of flowers round his neck. The queen had therefore posted the guards at the gates of the city that morning with orders to bring to her the first man that entered them.

When the guards dismounted at the palace with the handsome young prince in their charge, the queen ordered all the nobles of the court to assemble in the court-yard. She then gave orders for the sacred elephant to be brought round and put a garland of flowers on its trunk saying,—“Throw this round the neck of him who is destined by *Isvara* to occupy my husband's vacant throne.” The elephant looked around for some time and then made towards the place where the young prince was standing and dexterously threw the garland round his neck. At this there arose a loud shout of joy from the assembled multitude, and the newly elected king was taken into the palace and installed on the throne by the chief *gaurā* of the court. Next day there were great rejoicings throughout the kingdom, and the young prince was proclaimed king with great pomp. The poor lad, however, was not happy at this sudden change in his fortunes, for he thought of his brother whom he had left half-dead from want of food in the forest, and who, he feared, had perhaps died of starvation. He nevertheless despatched messengers in search of him and waited anxiously for their return.

Meanwhile the younger brother, after waiting for a few hours for his brother, put all his strength together and went in search of food and water. He wandered about for some time till chance led his footsteps towards a small stream, and there he refreshed himself with its delicious fresh water and the wild fruit that he found growing on its banks.

This partially restored his strength, and he walked on till he came upon an old potter digging for clay near a clay-pit.

“Shall I help you in digging clay, sir?” said the lad to the potter. “I am in search of some employment and would do anything for you if you would only give me some bread to eat.”

The potter had pity on him and said: “Yes, if you are really willing to work you may dig clay for me while I work at the wheel, and in the evening I shall give you a good dinner in return.”

So the prince at once set about his task and worked away with such a will that before evening the potter took a liking to him, and taking him home treated him to a hearty dinner.

By degrees the young prince learned the art of making pots, and he so improved upon the old potter's method that in a short time he was able to turn out the finest and most artistically designed pots ever seen, till at last the old potter became famous for the beautiful workmanship of his wares and grew quite rich in a short time.

Now the potter had no children, so he and his wife adopted the good prince as their son, and treated him with the greatest kindness and affection.

After remaining with them for some time, the young prince one day asked the potter's and his wife's permission to go on a journey, saying that though they loved him as their own son and made him want for nothing, he felt very anxious about his brother, and was therefore determined to find out what had become of him since they parted.

The old people felt grieved at the idea of parting with him, but seeing that he was determined, gave him their permission with the greatest reluctance, and once more the young prince set off in search of his brother.

For several years he wandered about from one country to another without finding any trace of his lost brother, till at last one evening he sat down weary and dejected on the doorstep of a poor old woman's cottage, and being very hungry, looked wistfully at some wheaten bread she was baking. The poor woman, when she saw the weary traveller, took pity on him and invited him to enter the cottage and partake of some bread.

The youth went in, but was surprised to see the woman weeping and sighing bitterly as she made her bread.

"What ails you, good mother?" cried he in a kind voice. "Tell me the cause of your grief, and I shall do my best to help you."

Upon this the old woman said—"A fierce ogre has long infested this part of the country, and of late he had been spreading his ravages far and wide, and our king being unable to cope with him was obliged to enter into an agreement to supply him with a cart-load of sweet wheaten cakes, a couple of goats, and a young man every day, in consideration of which the ogre leaves the rest of the inhabitants unmolested. Now the king finds the cakes and the goats himself, but calls upon the inhabitants to supply the young men, and so each family has to give one every day. To-night it is my turn, and I must send my dear son to be devoured by this monster." So saying the old creature burst into a flood of tears.

"Don't weep, my good woman," said the prince kindly, "but listen to what I say; let me go to the ogre to-night in place of your son, and by the help of Išvara I shall kill the monster."

But the old woman's son, who was also a brave fellow, would not hear of a stranger sacrificing himself, as he thought, to save his life, so an altercation took place between them, which lasted till midnight, when the king's guards came up to the door and demanded her son of the old woman.

The young prince, however, shut him up in a room, and opening the door rushed out and joined the guards. They soon mounted him upon one of the carts they had brought with them full of provisions, and binding him hand and foot drove away.

When they arrived at the spot where they usually left the ogre's meal they stopped, and unyoking the oxen went away with them, leaving the young man there with the goats and the cakes in the carts.

They had hardly gone a few yards when the clever youth managed to extricate one of his arms from the cords with which they were tied, and pulling out a sharp knife from his pocket cut all the cords and set himself free. He then got out of the cart and hid himself under it. Presently the ogre came foaming at the mouth

and smacking his lips in anticipation of his favourite meal, when the brave prince dexterously hurled a number of cakes at his feet and as he stooped to eat them he crept unperceived under his body and plunged his sharp bright knife right into his heart! The monster fell back with a groan, and the prince, stepping aside, plunged his knife again and again into his body before he had time to recover from his consternation, and after a sharp encounter succeeded in putting him to death. He then opened the ogre's large mouth, and cutting off his tongue and severing his tail from his body he tied them up in a bundle, made full speed towards the old woman's house, and feeling very tired, soon fell fast asleep in her verandah.

The next morning, when the cart-men went back with their bullocks to fetch the carts as was their wont, they were surprised to see the goats unhurt, the man missing, and the ogre lying dead at some distance.

Now the king of the country had issued a proclamation some time previously to the effect that he would give half his kingdom and his daughter in marriage to any one who would kill the ogre, so the cart-men thought that, as chance had thrown this opportunity of enriching themselves in their way, they should make the most of it, and determined, therefore, to go and tell the king that they had killed the ogre and claim the promised reward.

So they put a hundred pairs of bullocks together and dragged the huge monster towards the king's palace, and loudly proclaimed before the assembled court that they had killed him by the sheer force of arms.

The king, however, disbelieved their story and asked them to produce the weapons with which they had fought the ogre and deprived him of his life.

The poor swains were non-plussed at this, and for a time they could say nothing. At last one of them mustered up courage to say "I wounded him with my knife, Mahārāj, while my friend here thrashed him with his club and between us two we managed to despatch him."

"And will you show me the wonderful knife with which you killed such a monster?" said the king.

The cart-man thereupon drew out of his girdle a rusty old blade and showed it to the

king amidst the great merriment of the courtiers, while our young hero, who had been in court all the while watching the proceedings, could not help bursting out into a loud laugh.

At this the king ordered him to be brought before him and asked him what it was that had made him laugh so loud.

Then the young man related to the Rājā all about his adventures with the ogre in such a plain straightforward way that the king was quite convinced of the truth of his narration. His Majesty, however, ordered him to produce the weapon he had used in the encounter, and the prince at once drew out his sharp bright knife and flashed it before the eyes of the assembled multitude.

The cart-men, as might be supposed, made a show of disbelieving the youth's story, and loudly protested against being robbed of their just reward by a stripling like him. Upon this the prince begged of the king to ask the cartmen what had become of the ogre's tongue and tail.

"Oh, perhaps he never had any!" cried the men simultaneously, "for when we killed him we found him without them."

"Then wait till I show them to you," cried the prince, and opening a bundle and taking out the tongue and the tail, he placed them before the king as a convincing proof that it was he who had killed the ogre.

The king at once ordered the cart-men to be ignominiously driven away, and embracing the young prince, hailed him as the deliverer of his country. He then, as promised in the proclamation, **transferred the sovereignty of half his kingdom** to him and made preparations for his marriage.

The astrologers having fixed upon the day on which to celebrate the auspicious event there were great rejoicings in the city and the old king sent out numerous invitations to all the neighbouring Rājās to join in the festivities. Among those who accepted them was one young Rājā who was said to have been elected to the throne by a court elephant and who was held in high esteem by his subjects. So our hero was naturally very eager to see him, for he thought that if ever the *chakrā's* words had come true it must have been his brother who had been made king in this singular fashion. So he looked forward with great

interest to the day on which this Rājā was expected to arrive.

The day came round at last, and the young prince's heart leapt within him for joy when he recognized in the royal visitor his long-lost brother. The two brothers greeted each other very affectionately and told each other of all that had happened since they had parted, and so much was the elder affected with the narration of his younger brother's sufferings that he fell upon his neck and the two big men wept like little children.

This unexpected meeting of the brothers lent greater hilarity to the joyful proceedings, and the two spent several happy days in each other's company.

When the wedding festivities were over they resolved to go and pay a visit to their old father. So they got ready a large army and marched with it towards their native country.

After several days' weary marching they reached the place and pitched their camp on the outskirts of their father's capital. The old man, being duly informed of this, trembled to think that some foreign Rājās, more powerful than himself, had come to deprive him of his throne. It was then that he thought of his sons, and regretted very much that they were not living to help him in his old age, having been condemned to an early death owing to the evil influence exercised upon him by his wife, who, be it mentioned, had long revealed herself to him in her true colours. So he thought it best to conciliate the invaders and make peace with them on easy terms, and accordingly sent his prime minister to them with rich presents and offers of more, if they would let him remain in undisturbed possession of his kingdom.

The two Rājās in their turn sent back word that they had not come to his country with any hostile intent, but only meant to pay him a friendly visit. So the old king went out himself to meet them and implored them with clasped hands to have mercy on him in his old age and not to shed the blood of his innocent subjects since his two brave sons lived no longer to protect them.

At this both the brothers fell at their father's feet and begged him to receive back to his heart his **long-lost sons**, telling him how the good executioner had spared their eye-sight and how they had come to be in the state in which he found them.

The old king could not believe his eyes, so strange it seemed to him, that the sons whom he had mourned as dead should be standing before him.

The brothers then caused their step-mother to be brought before them in order to question her in the king's presence as to the foul charge she had laid at their door.

The wicked woman, however, felt so ashamed of herself that she fell at the young men's feet and confessed her guilt.

The king, who had long seen his mistake, at once ordered her to be driven out of the kingdom, and the father and his two sons then entered the city with great pomp and lived very happily ever afterwards.

A NOTICE OF THE ZAFARNAMA-I-RANJIT SINGH OF KANHAYYA LAL

BY E. REHATSEK.

(Continued from p. 60.)

When six months after the occupation of Peshāwar had elapsed, a courier arrived from Kābul with two letters from **Dōst Muḥammad**, one addressed to the Mahārājā and the other to the prince. He complimented Ranjit Singh on the great power he had attained, but requested him to restore the Governorship of Peshāwar to **Sultān Khān**, who had always paid his tribute regularly, and had been tardy only the last year. He moreover promised to march with his own troops against Sultān Khān and to punish him if he should afterwards at any time be remiss in sending the tribute. The Mahārājā, highly displeased with the presumption of Dōst Muḥammad, said that he had conquered the Panjāb, and being able to defend the district of Peshāwar likewise, he challenged Dōst Muḥammad to invade it. Then he despatched **Gulāb Singh** [of Jammūn and Kashmīr] with a body of troops to Peshāwar, and shortly afterwards also followed in person himself; but when he arrived at **Rohtās** the news came that Dōst Muḥammad had already reached the **Khaibar Pass** and would soon attack Peshāwar, and that, although the Prince Nau Nihāl, Harī Singh and Ventura were on the spot and ready to defend the province, the Mahārājā's presence would ensure a speedy victory. Ranjit Singh therefore now went forward with greater speed, and his progress was not interrupted till within a day's journey from Peshāwar, when the enemy gathered in force and attempted to block the way. The Mahārājā ordered **Sukhrāj** to disperse the rebels who, however, stood their ground and were put to flight only after a contest of several hours. Ranjit Singh entered Peshāwar the next day, when the Prince Nau Nihāl with the officers who had

already been there for some time received him with great demonstrations of joy. Sultān Khān also desired to pay his respects, but the Mahārājā wrathfully turned away from him.

Sultān Khān thereon offered his excuses, and succeeded so well, that the Mahārājā presented him with a *jāgir* valued at three *lāḥs* in the Kohāt district, and sent Faqīr 'Azīzū'ddīn as an envoy to Kābul for the purpose of making friendly overtures to Dōst Muḥammad, and reproaching him with having assumed a hostile attitude towards himself. The envoy had commenced to hope that he would induce Dōst Muḥammad to pay a visit to Ranjit Singh, but some of his advisers succeeded in arousing his suspicions, and he granted no more interviews to the ambassador, who was kept under surveillance till the army of Dōst Muḥammad had reached the Khaibar Pass, where it encamped, and he was then permitted to depart. Hereon the Mahārājā despatched Harī Singh, with Gulāb Singh, Mahārājā of Jammūn and Kashmīr, to attack the Afghāns, but the latter had already disappeared and retired to their own country when the Sikhs arrived. Accordingly Ranjit Singh left a garrison to guard the frontier and marched back to Lāhōr, whence he proceeded to Amṛitsar, where he ordered the **wedding of Prince Nau Nihāl** to be celebrated, to which also the commander of the English forces at Firōzpur, and the Agent, Mr. Wade, who resided at Lōdiānā, were invited, as well as the Rājās of note. After the festivities, during which large sums were disbursed, the guests received costly presents of silk dresses and jewellery and then took leave. Before, however, the ladies, who had accompanied the English commander, departed, they requested permission from the Mahārājā to pay a visit to his ladies.

towards him, and the artillery fired a salute. The interview took place with the usual solemnity, and at the end of it the Governor-General offered presents to the Mahārājā, the principal of which were a beautiful portrait of Her Majesty Queen Victoria, which was much admired and saluted by the rising and bowing of the whole assembly, whereon the artillery boomed a grand salute, and the Mahārājā took his departure. The next day the Governor-General returned the visit, and the day afterwards the Mahārājā gave a grand banquet to the Governor-General, and they dined together. On the third day the latter returned the same hospitality to the Mahārājā, and at the last interview at Firōzpur, which took place on the fourth day, the Mahārājā invited His Excellency to accompany him to Amritsar and to Lihôr. The invitation having been accepted, they both marched with their armies, first to the sacred city and then to the capital, but whilst sleeping one night in the latter, the Mahārājā was suddenly attacked by a fit of the disease called *lagwa*.⁷⁶ The Governor-General manifested for him the greatest sympathy whilst in Lihôr, and the Mahārājā, recovered sufficiently to make arrangements for the departure of six thousand troops, one-half consisting of cavalry and the other of infantry, with six pieces of artillery, and commanded by Ventura, to Peshāwar. His force was accompanied by Mr. Wade, who had some two hundred men, and four pieces of English artillery with ammunition. When the Governor-General, who, as already stated, was much affected by the calamity of the Mahārājā, had seen these arrangements executed, he left Lihôr, and returned to Firōzpur.

49. The disease, which lasted several months, had now so enfeebled Ranjit Singh, that only a spark of life remained in his body. His complexion was changed to yellow, his tongue had become purple, his once powerful strength had so vanished that he was unable to turn from one side to the other; he had no appetite, his body was emaciated, the *lagwa* attacked him with intense pain, and paralysis deprived him of motion. His court physicians, Ināyat Shāh, Nūr-ud-dīn, and 'Aziz-ud-dīn tried their best to cure him, as well as

other medical men from the Panjāb, from Multān, and from Kāsmūr, but all to no purpose; and when a celebrated English doctor, whom the Governor-General had sent, arrived, the Mahārājā absolutely refused to be treated by him. He continued, however, to swallow the medicines of his own physicians, who administered to him oranges, which augmented his jaundice, *sandal*, which increased his headache, and almonds, which intensified his thirst, whilst musk and ambergris produced fainting, exhilarant drugs made the heart palpitate, and strengthening potions caused a restless liver! Seeing his end close at hand, the Mahārājā now summoned his heir apparent to his bedside, and, appointing him his successor, surrendered the government to him, and made Dhyān Singh his *wazir*. After that, great numbers of courtiers and servants were admitted to whom alms were distributed, which were, however, bestowed not only upon persons connected with the service of the court, but included also the poor of the town, and even of one place where Nānak had first seen the light of day, and of another where the remains of the founders of the Sikh religion had chosen their last resting place.⁷⁷ After having thus given away twenty-five *lākh*s of rupees in alms, Ranjit Singh desired to crown his beneficence by bestowing the priceless diamond Koh-i-Nor as a gift upon the temple of Rām Das, but his heir apparent absolutely refused to permit such prodigality. The condition of the Mahārājā now became even worse, his mind began to wander, his fainting fits became more frequent, his breathing more difficult, and he sometimes closed his eyes and sometimes wept bitterly.

When the heir-apparent saw that the last moment had approached, he spread out a carpet of Indian *kashmīr* (or golli-dā) and of Chinese brocade with ten *lākh*s of rupees in alms, and made other arrangements necessary for the impending death-scene. Resting upon this carpet, the Mahārājā expired, whereon the whole of the Panjāb went into mourning, and lamentations resounded in the palace. Some persons wept aloud, some silently, others stroked their beards, and Dhyān Singh, the son of the deceased Mahārājā,

⁷⁶ Distortion of the mouth and convulsions.

⁷⁷ The places are the dargāh Nānak in Lāhōr, Nānak Pīr.

desired to be immolated on the funeral pyre with the body of his master, but was dissuaded by the other courtiers. The ladies Harvî and Râjvî,⁷⁸ with other handmaids of Ranjît Singh also prepared for the last journey, and expressed willingness to be immolated. The successor caused immediately a golden bier to be prepared in the form of a litter upon which the corpse was placed amidst wailings, and carried from the fort by the army and the population, to which last the nobles distributed money. When the funeral procession reached the burning ground, the corpse having been placed upon a pyre of sandalwood, the faithful Rânîs were allowed to stand beside it, and the heir-apparent approaching, set fire to it with his own hands. When the flames shot upwards to the sky, a general shout of lamentation shook the earth, and shortly afterwards an abundant shower of rain fell, whereon the ashes were collected, the remaining ceremonies performed, and all was over. Thus Ranjît Singh died in St. 1896 [A.D. 1839] after a reign of forty years. His burnt bones were by order of the heir-apparent conveyed to the banks of the Ganges, and he ordered a grand **mausoleum** to be built over them, but did not live to see it completed. The Mahârâjâ Shêr Singh endeavoured to do so, but it was not finished when he died, and disturbances having arisen in the Pânjâb, the building was altogether neglected. The British Government, however, annexed the country and finished the edifice, which then remained in good condition during a number of years. At last, however, the eight columns which had to support a heavy cupola, began to give way and to break, whereon the author of this work added, by order of the Government, eight columns more, making the total number sixteen, and strengthened them with iron-hoops, so as so insure their stability for a long time to come.

41. After the demise of Ranjît Singh, his successor **Kharak Singh** ascended the throne and assumed the reins of government as soon as his season of mourning had expired. **Dhyân Singh**, who had been *wazîr* during the previous government remained in his former position, but was after a short time neglected in favour of **Chait Singh**, an ambitious and intriguing

sardâr whom the new Mahârâjâ henceforth consulted on all occasions, although he possessed no experience in the administration. The *amîrs* of the *darbâr* were so displeased with Kharak Singh's choice that they waited upon his son **Nau Nihâl Singh**, who was according to our text a very intelligent and sweet-spoken young prince, and represented the matter to him. Accordingly he went to his father and informed him, but Kharak Singh who was a good-natured man and void of all ambition to govern, paid not the least attention to the warnings of his son, who thereon took his place on the throne with the approbation of the *darbâr*, and as Chait Singh, his father's *wazîr*, still desired to monopolise authority, he slew him with his own hands. The murder of his *wazîr* greatly affected Kharak Singh who had already given up the administration and now altogether retired, but when he heard that Nau Nihâl Singh had been formally installed by the *darbâr* on the throne, he fell sick and shortly afterwards died. His funeral was solemnized with great pomp. Alms were largely distributed, the corpse was borne to the river-bank on the shoulders of Nau Nihâl and some *amîrs*, and on its being committed to the flames, two Rânîs, widows of Kharak Singh, were likewise burnt on the pyre, with nine of his handmaids.

After the cremation **Nau Nihâl Singh** performed his ablutions in the river, and afterwards returned with the crowd of *amîrs* to the fort, but on entering the first gate, a stone detaching itself from the top of it fell on his head, and suddenly extinguished the lamp of his life. Now the *wazîr* who is, by the author, stated to have been both a politician and a warrior, desired to place the prince **Shêr Singh** upon the throne, but was opposed by the **Rânî Chand Kânwar** the mother of Nau Nihâl Singh, who being supported by the Sardârs Ajît Singh, 'Atar Singh, and Lahná Singh, all of whom were of the family of **Sindhâi-waliâ**, assumed the reins of government. After the lady had been placed upon the throne, the *wazîr* abstained from appearing in the *darbâr*, and, departing from Lâhôr, retired to Jammûn, his ancestral home. In his absence the Rânî enjoyed her power a few

⁷⁸ According to a marginal note Harvî and Râjvî were wives of Rânjît Singh, and daughters Sausâr Chand Katôch of Kângrâ.

months undisputed, but the military party was dissatisfied, and believed that a woman could not possess the valour, the knowledge, and the tact required for governing, although a solitary example in which these qualities are united, is existing in the world, in Queen Victoria, who is, however, guided by the wise counsels of her ministry! **Shēr Singh**, having accordingly been invited to assume the reins of Government, marched with his forces from Vatilā, but on arriving at the gates of Lāhōr, found them closed. He then occupied the town and laid siege to the garrison, which he attacked and compelled to surrender three days afterwards, chiefly through the instrumentality of the **Mahārājā Gulāb Singh**, who had returned just in time from Jammūn, and brought the negotiations to a satisfactory issue.

42. When **Shēr Singh** attained the supreme power, the opposing **Sindhānwālīā** faction was dismayed, and its chiefs forthwith sought refuge in the British territory. Meanwhile the new sovereign was endeavouring by the aid of his faithful *wazīr* **Dhyān Singh**, to restore security, to regulate the administration, and to promote the welfare of his subjects, and trying also, by dispensing justice and by a liberal distribution of presents, to gain their affections. After two years had elapsed in this manner a serious estrangement arose between **Shēr Singh** and his *wazīr*, the breach being widened by malevolent persons who suggested new causes for disagreement to both. The chief cause appears to have been the anxiety of the **Mahārājā** for reconciliation with the **Sindhānwālīās** which the *wazīr* disapproved of, and as will appear further on, rightly so, because it cost both of them their lives. Nevertheless the **Mahārājā** invited many of the said faction to return to the **Pañjāb**, appointed them to high stations, bestowed upon them *jūfars*, and sought to please them in every way. Outwardly they were thankful and friendly, but that all this loyalty was feigned, appeared plainly when the **Sardār Ajit Singh, Sindhānwālīā**, took aim at **Shēr Singh** as he sat in *darbār*, at Shāhdara near Lāhōr, and shot him dead. On the same occasion also **Kaṇwār Partāb Singh**, the little son of the **Mahārājā**

Shēr Singh, was slain in a dastardly manner by the **Sardār Lahnā Singh, Sindhānwālīā**. The turbulent faction then marched into Lāhōr, and **Rājā Dhyān Singh** the *wazīr*, was slain in the fort by the abovenamed **Ajit Singh**, who fired at him, whilst defending himself on horseback against the invading crowd. When the conspirators had gained supremacy, they indulged for several days in revelling, and the population, dreading worse consequences, trembled with fear. The **Rājā Hirā Singh**, who was at that time with the army, and had heard what had taken place, appealed to the **Khālsā**³⁰ troops to aid him to avenge the murder of his father **Dhyān Singh**, as well as that of the **Mahārājā Shēr Singh**, and to place upon the throne **Dalip Singh**, a son of the **Mahārājā Ranjīt Singh**. This appeal having been eagerly responded to, the troops marched to the fort and opened a cannonade upon it which lasted the whole day, and the enemies having no ammunition began to evacuate the fort during the night, but it was surrounded by the troops, who succeeded in capturing, among others, three of the chief miscreants, namely, **Ajit Singh**, who had killed the **Mahārājā**, **Lahnā Singh** who had murdered the son of the latter, and **Misr Ghasīṭā**, a close ally of the **Sindhānwālīā Sardārs**. These three men were at once executed, their bodies dragged by ropes through the *bāzārs* and streets of the city, and then left to be devoured by beasts and birds.³¹

43. When the **Rājā Hirā Singh** had wreaked vengeance upon his foes, by making free use of the sword, the prince **Dalip Singh** was placed upon the throne. **Hirā Singh** went to the *darbār*, and was considered worthy to remain *wazīr*, but his counsellor the **Pandit Jallā**, an honest intelligent **Brāhman** and a good administrator, made use of severity in the execution of his duties, in which he pressed so hard upon the *amirs* by extorting money from them that he exasperated them. Moreover **Jawāhir Singh**, one of their number, who relied upon his position as maternal uncle of the **Mahārājā Dalip Singh**, and was the first to rebel against the haughty counsellor, was thrown into prison by the *wazīr*. Incensed at the presumption of his thus summarily dealing with her brother, the

³⁰ Literally meaning "pure, select," because those troops consisted only of Sikhs. The word is of Arabic origin but is used in all the Muhammadan languages.

³¹ If the above abstract correctly represents the facts this is a good version of these well-known events. —Ed.

Mahārāni Chandān, unknown to the dominant faction, despatched a message with great secrecy to the **Rājā Suchēt Singh**, brother of the late **Dhyan Singh**, informing him that the whole government had fallen into disorder, that as the sovereign was a child and his *wazir* young, **Jallā** had usurped the supreme power and extorted untold sums of money, and that therefore she invited the **Rājā** to introduce order into the administration by once more accepting the post of plenipotentiary *wazir*, and becoming the lieutenant of the **Mahārājā**. **Suchēt Singh** immediately started with his troops from **Jammūn** in compliance with the invitation, and hastily advanced towards **Lahōr** till he reached the banks of the **Rāvi**, where he left his troops and crossed the river with an escort of only a hundred men, marching till he reached the tomb of **Shēkh Karān**⁵² at a distance of three miles from **Lahōr**, where he encamped, and hoped his nephew **Hirā Singh** together with **Paṇḍit Jallā** would meet and welcome him. His expectations, however, proved futile, because **Hirā Singh**, now fully aware for what purpose his uncle had so quickly arrived from **Jammūn**, was determined to repel him, and, on being informed of his approach, forthwith harangued the Sikh **Khālsā** troops, promising a gold *batkī*⁵³ to every man who would follow him to attack his uncle. **Suchēt Singh** had been encamped only one day when the **Khālsā** troops arrived, surrounded the tomb, and at once not only destroyed it and the adjoining buildings and their tenants the *jaḡīrs* with their artillery, but exterminated to a man the whole escort of **Suchēt Singh**, as well as himself.

After this action **Hirā Singh** manifested grief for the loss of his uncle, but afterwards honestly paid the golden *batkī* he had promised to each soldier, although the sum was so large that the government treasury suffered very considerably. When a month had elapsed after this affair, one of the **Sindhāwālā** chiefs and malcontents **Atar Singh** by name, who had not been slain with the others—when the **Khālsā** troops avenged upon them the murder of **Shēr Singh**, and placed **Dalip Singh** on the throne,—but had escaped to the British territory, being determined to wrest from **Rājā Hirā Singh** the power he enjoyed, and to take vengeance, had

recourse for this purpose to **Bir Singh jaḡīr** who dwelt on the **Satluj**, and enjoyed great reputation for sanctity as a *gurū*, as well as considerable influence with the army; and induced him to address it, in order to obtain its aid to overthrow the government of the **Rājah**. When **Hirā Singh** was informed of these machinations, he summoned a *pañch* (*pañchayat*) of petty officers commanding a company of soldiers, to his presence—because they were able to influence the privates much more than the higher officers could, whom they also greatly exceeded in numbers—distributed money among them, and thereby so alienated them from the *gurū*, that they attacked his domicile with musketry. He was killed by a stray bullet and **Atar Singh** was also routed with his adherents. Some months afterwards, the uncle of the **Mahārājā**, **Jawahir Singh**, whose imprisonment does not appear to have been very strict, found opportunity to bribe a number of the officers of the army, by promising to each of them a necklace of jewellery, and holding forth to each trooper the reward of a *nām*,⁵⁴ to win them over to his cause. He succeeded so well that the officers despatched a memorandum to **Hirā Singh**, promising to remain loyal to him if he agreed to deprive his counsellor **Jallā** of power, who had by his tyranny incurred universal reprobation, but threatening him with death in the contrary case. When **Hirā Singh** became aware of his danger, he swore that he would never betray his friend, and would remain faithful to him even at the risk of his own life, but when he perceived that it was actually in peril, he mounted an elephant, and fled from **Lahor** with a few trusty followers intending to take refuge in **Jammūn**. The news of his flight spread quickly, and he had just reached the **Rāvi** when he was overtaken by thousands of Sikhs, who at once attacked him; whereon he alighted from his elephant, and defending himself with his handful of trusty mountaineers, fell sword in hand. On the same occasion also **Jallā** was slain with **Sōhan**, the young son of the **Mahārājā Gulāb Singh** of **Jammūn**, whereon the Sikhs returned victorious to **Lahōr**.

44. **Jawahir Singh**, the maternal uncle of **Dalip Singh**, now assumed the reins of

⁵² **Shēkh Karān**, the name of the **Mahārājā**.

⁵³ Name of a gold coin first issued by the Sikhs.

⁵⁴ The *nām* is, according to a marginal note, a gold jewel and ornament, called also *jaḡīr*.

government, and faithfully kept his promise of presenting the Sikh troops with golden necklaces, but after one *lakh* of them had been distributed the treasury was empty; whereon the troopers plundered all the government property they could get hold of. Jawāhir Singh then despatched a force to invade Jammūn, but only one encounter took place, in which the Sikh **Sardār Fath Singh** lost his life. Then **Gulāb Singh** held out bribes to the troops and marched with them to Lāhōr, where he fulfilled his promise. The prince **Pēshaurā Singh** a son of the Mahārājā Ranjīt Singh, who likewise entertained the ambition of becoming master of the Pañjāb, marched with his adherents to Aṭak, and took possession of the fort; whereon Jawāhir Singh despatched troops in command of **Chhatar Singh Atāriwālā** with other forces from Ḍerā Isma'il Khān, and they besieged the prince, who then represented to them, that being a son of Ranjīt Singh equally with Dalīp Singh, he ought not to be treated as a rebel, but should be received into favour after promising to be loyal to the existing government. After this declaration had been communicated to Jawāhir Singh, he learnt that the troops sent against the pretender were favourable to his claims, and accordingly devised the stratagem of presenting him with a *jāfir* of a *lakh* of rupees, on condition of his surrendering the fort. The prince Pēshaurā Singh then opened the gates, and Jawāhir Singh having been apprized that he had fallen into the trap, at once indited a letter to his faithful partizan **Fath Khān**, who commanded a portion of the forces, to slay the prince, for fear he might again lay claim to the throne. This order no sooner arrived than it was executed, and Fath Khān, besides obtaining a large sum of money, was rewarded also by being appointed governor of the Hazārā district. When it became generally known that the prince had been killed at the instigation of Jawāhir Singh, not only his adherents, but the whole army manifested such exasperation, that the mother of the Mahārājā Dalīp Singh was frightened, and made efforts to propitiate it, but in vain. The general reply was that he who had encompassed the murder of Ranjīt Singh's son had thereby forfeited his own life, and Jawāhir Singh was summoned to present himself before the troops to offer excuses, if he

had any to make. The *amīrs* of the court trembled with fear, and arrived themselves, after consultation, at the conclusion that they would confront the danger with Jawāhir Singh, the Mahārānī, and the Mahārājā Dalīp Singh, which last was to plead for the life of his uncle, uniting his request to the prayer of his mother. When the exalted party arrived in the camp, and the troops perceived **Dalīp Singh**, they unanimously saluted him, took him down from the elephant, but forthwith cut to pieces **Jawāhir Singh** who had remained in the *hauḍā*. On beholding this scene, Dalīp Singh wept bitterly, and the **Mahārānī** broke out in loud wailings, but took charge of her brother's corpse, which was conveyed to the fort, and afterwards received the honours of a funeral. The army now became so demoralised that no one any longer kept authority, and much disorder ensued. The *pañch* of petty officers, apprehending no coercion, began to plunder in all directions, mulcting the rich and frightening the poor. No trace of subordination and discipline remained, and every common soldier fancied himself an officer, and obeyed only his own inclination. This state of affairs having become unbearable to the nobles of the court, they were most anxious to put an end to it at any price, and at last arrived at the conclusion that the only way to rid themselves of the excesses of the army would be to goad it on to wage war against the **English**, who would be sure to vanquish it, though there was no other power in existence strong enough to do so. Accordingly the ringleaders of the army were requested to come to the palace, and when the crowd of disorderly *pañches* arrived, the **Rājā Lal Singh** harangued them, praised them as lion-hearted valiant **Khālsās**—the epithet most flattering to them—and told them that the English had taken possession of the *qasba* of Murān on the banks of the Satluj, and would, unless checked, be sure to encroach upon this side likewise. It was therefore their duty boldly to wage war against the English, and afterwards it would be their pleasure to enjoy supreme power over the country, there being no forces in existence able to cope with the Sikhs. The vanity and ambition of the troops having thus been brought into play, and raised to the highest pitch, the proposal was accepted with acclama-

tion; the general impression being that the English, who were *only Franks* and could not prevail against the Khālsās, would be conquered, unmercifully destroyed, and thus deprived of Hindustān.

45. After having made some preparations for a campaign the turbulent army marched to the Satluj, whilst all the Pūrbiās and white soldiers advanced towards them from the other side, led by their Commander-in-Chief and by the Governor-General himself, who sent first a memorandum to the Sikh army to the effect that the British Government had always been on friendly terms with Ranjīt Singh, and that there being no occasion for hostilities, the troops ought to return to their homes. This advice remaining unheeded the contest began, and the first action took place at **Mūdki**, in which 30,000 Sikhs took part with 32 pieces of artillery, the Commander-in-Chief being **Lāl Singh**, who was outwardly a friend to the Sikhs, but inwardly their worst enemy. The Sikhs who made the attack fought valiantly and caused rivers of blood to flow. The English advanced and the noble (political) agent **Broadfoot** was with them till the evening, when he was slain on the battle-field, which

event emboldened the Sikhs. Nevertheless **Lāl Singh** began to retreat, and the Sikhs perceiving this, followed his example, whereon the English were not slow in pursuing them, taking also possession of their artillery. The next action took place at **Firōzpūr**⁵⁵ where ten regiments and the full *paltans* of the Sikhs fought, and having also 100 pieces of artillery at their disposal, they boldly advanced to open the battle. The English had two noble officers, one **Hardinge**, the valiant *amir* and Governor who was a lion of war, and the Commander **Gough** celebrated for his courage. They ordered the troops to make a simultaneous onslaught, one side of the plain being occupied by the white soldiers who rained cannon balls upon the Sikhs, whilst from the other Hindustānī troops attacked them. When the fight was at its hottest, and the ground had become a tulip-field of blood, **Rājā Tēj Singh**, the commander of the Sikhs, found it unsuitable to hold his ground any longer, and retreated; whereon the whole Sikh army fled, and on this occasion the treasure with all the ammunition and 72 pieces of artillery fell into the hands of the English.

(To be continued.)

MISCELLANEA.

CURIOSITIES OF INDIAN LITERATURE.

SOME QUIANT BLESSINGS.

The following blessings were collected by me in Mithilā. They are much admired by the Pandits:—

II.

गवीशपत्रो नगजानिहारी
कुमारतातः शशिखण्डधारी ।
लङ्केशसम्पूजितपादपद्मः
पायादनादिः परमेश्वरो वः ॥

This is capable of either of two interpretations as follows:—

'May the Supreme Lord without beginning (Śiva)—who is mounted (पत्रो) on the lord of cows, (re a bull), who is the destroyer of the pains of the Daughter of the Mountain (Pārvati), who is the father of Kumāra, who bears the crescent of the moon and the lotuses of whose feet were worshipped by the Lord of Lankā (Rāvaṇa),—protect you.'

The other interpretation is obtained by cutting

off the first syllable of all the above epithets as follows:—

'May the Supreme Lord without beginning (or found by omitting the beginning of the above epithets) (Krishna),—who is mounted on the lord of birds (वि + ईश i.e. a peacock), the destroyer of the pains of the elephant (गजानिहारी), the father of Māra (मारतातः), who is decorated with a peacock's tail (शिखण्डधारी), and the lotuses of whose feet are worshipped by Kēśa,—protect you.

III.

विराजराजपुत्रार्येनाम चतुरक्षरम् ।
पूर्वार्धे तव शत्रूणां परार्धे तव वेदमनि ॥

'May the first half (मृत्यु i.e. death) of the four syllabled name (मृत्युञ्जय) of the enemy of Pradyumna, be in the house of thy enemies, and the second half (जय i.e. victory) in thine.

Here वि = a bird. विराज = Garuda.

विराजराज = Krishna. विराजराजपुत्र = Pradyumna.

⁵⁵ [Really at Pêrûshahr or Ferozeshah, eight miles from Firōzpūr on the Lōdiānā Road.—Ed.]

ZOROASTRIAN DEITIES ON INDO-SCYTHIAN COINS.¹

BY M. AUREL STEIN, PH.D., M.R.A.S.

ALTHOUGH the latest in that long series of numismatic relics, which form our main documents for the history of the Greek and Scythic rulers of Bactria and India, the coins of the **Turushka kings**, are perhaps the most important for the student of Aryan antiquities. Their extremely varied reverses exhibit in well-executed designs and clearly legible characters the figures and names of numerous **deities**, many among which, as already recognized by the first observers, bear an unmistakably **Zoroastrian character**. These representations are, in fact, almost our only contemporary documents for that most obscure period in the history of Zoroastrian worship which intervened between the fall of the Ancient Persian Empire and the Sassanian revival. The identification of the types represented must therefore be considered a task of the first importance for the student of the Iranian Religion. On the other hand, Historical Grammar can attach scarcely less importance to the elucidation of the legends, considering that they are clearly written phonetic specimens of the language, which can be dated, with something like chronological exactness, since the late Mr. Fergusson's ingenious discovery² has revealed the identity of the **Šaka** era (starting from A.D. 78) with the era employed by the Turushka kings of our coins in their Indian inscriptions.

The philological enquiry into the types and legends of the Indo-Scythic coinage has made but comparatively slow progress since the days of Prinsep and Lassen: but perhaps it may now be resumed with some chance of success, since Dr. von Sallet's exhaustive monograph³ based on true historical criticism, and more recently Prof. P. von Gutschmid's excellent catalogue⁴ of the rich collection at Berlin, have placed us in full possession of the numismatic facts. At the same time our great advance made in our knowledge of Zoroastrianism, through the more extensive study of its sacred literature, enables us to utilize,

with a clearer view of the issue, the fresh evidences of the coins. We shall attempt here to collect in a condensed form the information which that remarkable coinage affords on the state of Iranian religion and speech in the centuries preceding the Sassanian epoch.

For the historical facts connected with the rule of the **Yueh-chi** or **Kushans** in India we can refer our readers on the present occasion to the above-named publications of von Sallet and Prof. Gardner, and to the excellent account contained in the late Prof. von Gutschmid's article on Persia in the 9th Ed. of the *Encyclopædia Britannica*. They afford, however, but little material for the solution of the question that mainly interests the Iranian scholar—*viz.*, how and where these tribes of evidently non-Aryan descent became so deeply penetrated with Zoroastrian influences. But from Chinese annals we are able to fix the date of the invasion, which brought the Yueh-chi under King Kadphises south of the Hindu-Kôsh, at about B.C. 25, and a century later we meet with distinct traces of Zoroastrianism among them. King **Kanishka** (on the coins **KANHPKI**), whom Buddhists in their traditions claim as the great patron of their church, and with whom the **Šaka** era originated (A.D. 78), is the first known to employ Iranian types and "Scythic" legends on his reverses. His successor was **OOHPKI** (**Huvishka**), whose inscriptions range from the year 33 to 51 of the **Šaka** era (A.D. 111-12). His very numerous coins, on which Greek legend is here now denied, display besides some new types of Iranian deities to the already large pantheon of K. 1. 1. 1. The issues of Huvishka are the first of Indo-Scythic coinage with which we are concerned on the present occasion, as the next belong to coins of a later king, who bears the name of **BAZOΔHO** (**Vasudêva** in the Chinese annals), are restricted in their types to the more or less barbarous representations of a few non-Zoroastrian deities.

In the Place which accompanies our remarks

¹ Adapted with additions from the *Journal of the Asiatic Society of Bengal*, 1879, p. 1.

² *On the Šaka, Saka, and Kshaka Eras*, by M. A. S. 1880, p. 250 sqq.

³ *Die Münzen der Yueh-chi und Kushans in Bactrien und Indien*, Berlin, 1879.

⁴ *Die Münzen der Griechisch und Scythischen Könige von Bactrien und Indien*, Berlin, 1886.

on the various types are represented well-preserved specimens of Indo-Scythian coins in the British Museum, for the casts of which we are indebted to the kindness of Prof. Gardner. This obviates the necessity of noticing in detail the characteristic designs of the types and the not less peculiar writing of the legends. The highly original treatment which the Greek characters have received at the hands of the Indo-Scythic die-cutters deserve special investigation from epigraphists; but for our present object it may suffice to call attention to the general clearness and fluency which distinguishes very favourably this apparently barbarous writing on the gold coins of Kanishka and Huvishka from the cramped and ill-shaped legends of their Scythic predecessors.

In the large assembly of Zoroastrian deities, which the coins of their Scythic worshippers bring before us, **Mithra**, the God of Heavenly Light, may well claim precedence, from the important position he occupies in Avestic mythology as well as in Eastern cult generally.

The Iranian **Mithra** has been long ago recognized in the very characteristic type of the **Sun-god**, that on the rare Greek coins of Kanishka bears the name of **ΗΑΙΟC**. Not less varied than the representations of the god himself are the forms in which his Iranian name appears. **ΜΙΟΡΟ** and **ΜΙΙΡΟ** (figs. i. and ii.) are the most frequent readings, and represent but slightly varied pronunciations of the same form **Mīhr**, which the Avestic name must have assumed at a comparatively early date through the regular phonetic change of *h* into *k*. **ΜΙΙΡΟ** corresponds to the Indianized form *mihira* (*aihir*), with the well-known initial position of a secondary vowel before *r*; **ΜΙΟΡΟ** represents *mīhr*, and gives us a clear instance of the phonetic rendering of *h* by **O** (as in **ΟΟΗΡΚΙ**=*Huvishka*), to which we shall have to refer in the further course of our enquiry. The closing **O**, which recurs at the end of almost all Iranian names of the coins, cannot as yet be accounted for with any certainty. The historical study of the Iranian language leads us to believe that the final

vowel of Zend and Old Persian words was lost in their transition into the phonetic state of Middle Persian or Pahlavi; but as the latter is in its main characteristics reflected by the legends of the Indo-Scythic coinage, this closing **O** cannot well be considered a representative of the old thematic vowels. We may, however, look for some connexion between this **O** and the sign which is added to so many Pahlavi words with consonantal ending, and is generally transcribed by *ō*.

Besides the above forms, we meet with numerous variants of the same name, *viz.*—**ΜΕΙΡΟ**, **ΜΙΥΡΟ**, **ΜΥΙΡΟ**, on Kanishka coins,⁵ and **ΜΙΥΡΟ**, **ΜΥΡΟ**, **ΜΙΡΟ**, **ΜΙΡΡΟ**, **ΜΙΙΟΡΟ**, **ΜΟΡΟ**, on those of Huvishka.⁶ Some of these forms may be viewed as individual attempts to give a phonetical equivalent for the difficult aspiration; others, like **ΜΙΡΡΟ**, **ΜΟΡΟ** are scarcely more than mere blunders of the die-cutters.—From this list of forms the supposed **ΜΙΘΡΟ** has been justly eliminated by von Sallet, as this archaic form can nowhere be read with any clearness, and would, in fact, not well agree with the general phonetic character of the names represented.

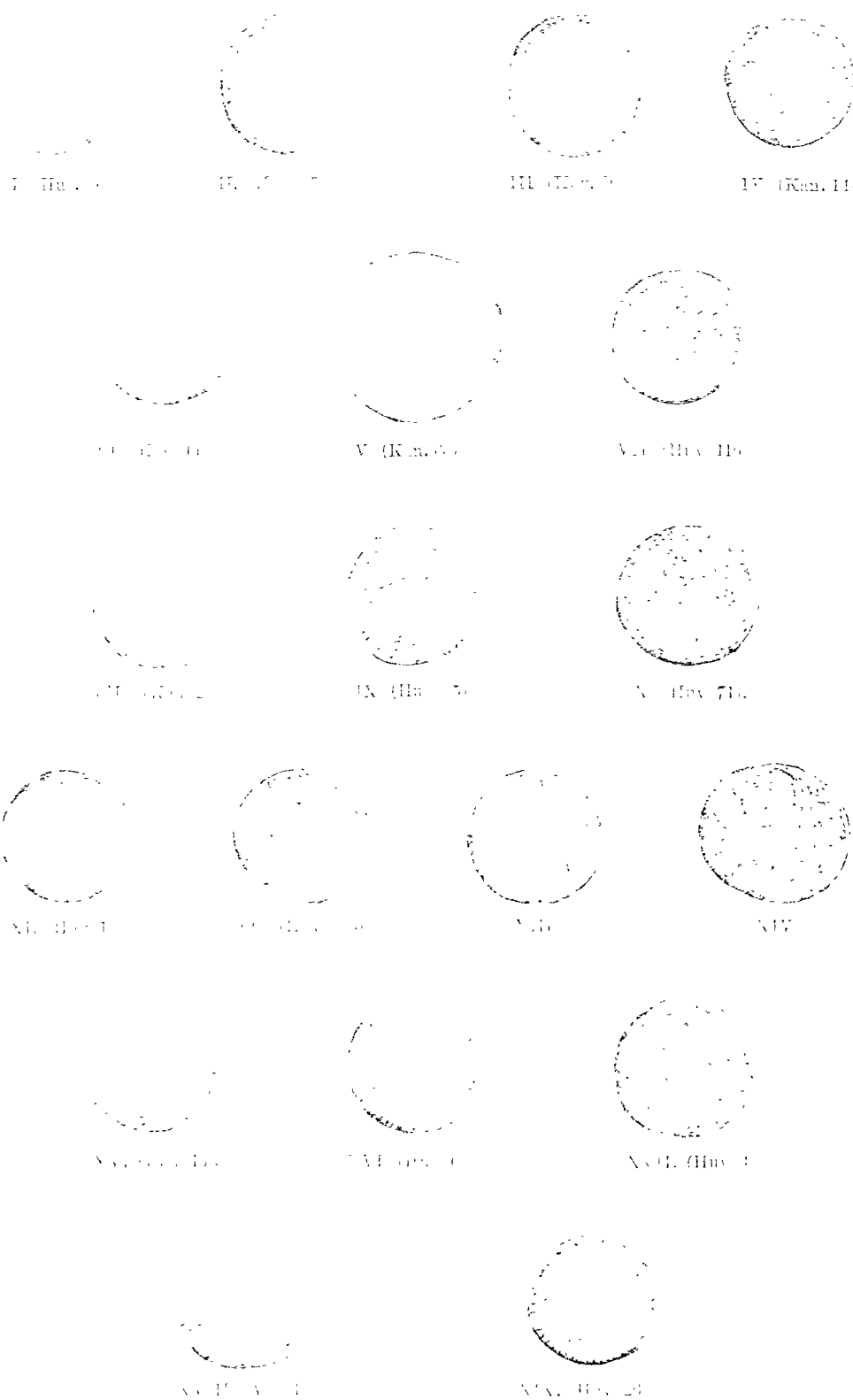
It is of considerable interest to compare with the Scythic name of **Mithra** the various forms in which the name of the Iranian month **Mīhr** appears in the list of Cappadocian months. This list has been preserved for us in a chronological table, which compares the calendars of different localities, found in numerous Greek MSS. of Ptolemy's *Canones*. It has been carefully examined by Benfey,⁷ and proved to contain the names of the months in the Zoroastrian calendar, as still in use in Cappadocia under the Roman rule. Now Iranian months are designated by the names of their respective tutelary deities, and as some of the latter are represented on the Scythic coinage, the Greek transcriptions of their names theron (which are found, too, in a much later form in the lists of Persian months given by Isaacus Monachus and other Byzantine chronologists) will give us much valuable help for the identification of the Scythic forms.

⁵ See Prof. Gardner's *Cat.* pp. 131, 134; and von Sallet, *Numismat.* p. 197.

⁶ See *Cat.* pp. 141—143, 155, 157; von Sallet, p. 192.

⁷ *Monat-namen einiger alter Völker*, Berlin.

1836, p. 76, sqq.—I regret that I have not yet been able to consult an article by Prof. De Lagarde on this subject in his *Abhandlungen*, to which Prof. Hoffmann of Kiel has kindly drawn my attention since my arrival in India.



COINS OF THE TURTUKA KINGS

The MSS. of the *Hemerologium*, in which are contained the Cappadocian names, are divided into two classes. One of these presents us with the forms *Μηράν*, *Μωαπ*, *Μουα*, *Μυαπ*, which all correspond with more or less accuracy to the original *Mihr*, the **MIPO**, **MIPO** of our coins; the other gives the older form *Μελρί*, which may have been taken from an earlier compilation. The later lists of Byzantine origin represent the Persian *mihr* by *Μεχρ* or *Μεχερ*.⁷

The representation of the god makes it sufficiently evident that the Avestic **Mithra**, already closely connected with the Sun, had by that time become completely identified with it. None, however, of those numerous symbols, proper to the Western *DEO INVICTO SOLI MITHRAE*, are to be found on the types of **MIPO**.

The type of **MIPO** appears also in conjunction with the not less characteristic representation of his heavenly brother the **Moon-god**, **MAO**, on a coin of the British Museum.⁸ The types of the latter resemble in all important features that given in fig. iii., and agree well with the masculine conception of the Avestic Moon-god, called *máo* (=Skr. *más*) or (with thematic stem), *máúha*. His name becomes **Mâh** in Pahlavi and modern Persian, and this is the form which is represented by **MAO** of the coins: but whether the **O** corresponds to *h* as in **MIPO**, or is merely the closing **O** discussed above, cannot be decided. On two coins of the British Museum⁹ we find the fuller transcription **MAOO**, which probably must be read *máhhō*, and on a Greek coin of Kanishka¹⁰ the usual male figure of the moon deity is accompanied by the legend **CAHHNH**.

We may here conveniently notice a comparatively rare type of Kanishka (fig. iv.), representing a bearded god with a trotting horse beside him, as, on account of the legend, we have to identify this deity with another, but less known, inhabitant of the ethereal regions in Avestic mythology. Although the former reading **ΑΡΟΟΑΣΠΟ** had to be abandoned in favour of **ΛΡΟΟΑΣΠΟ** on the evidence of the well-preserved specimens examined by von

Sallet and Prof. Gardner,¹¹ the substantial identity of the word with Zend **Aurvāt-aspa**, first proposed by Windischmann, can scarcely be doubted. The Avestic word, which literally means "swift-horsed," is the common epithet of both the sun (*hvarakhshu'ta*) and the god **Apām-napāt**, "the Son of the Waters," whose original character as an old Aryan personification of the Fire, born in the clouds, *i.e.*, the Lightning,¹² can still be traced in Avestic passages. But having already observed that the Sun-god became merged with Mithra into the single type of **MIPO**, we may safely conclude that the **ΛΡΟΟΑΣΠΟ** of Kanishka is "the High Lord Apām-napāt, the swift-horsed" of the *Avesta*. The puzzling initial **Λ** of the Scythic legend may be explained with Prof. Hoffmann¹³ as the first trace of the phonetic process, by which *Aurvāt-aspa*, the name of King Vishtāspa's father, was turned into *Lūhrāsp*, *Luhrás*, in Pahlavi and Persian. This process, itself, however, is by no means clear, especially as we find the phonetically correct representative of the Zend *aurvāt-aspa* still preserved in the name Arvandāsp which is mentioned in some genealogical lists as that of King Vishtāspa's grandfather. If **ΛΡΟΟΑΣΠΟ** is to be considered as the link between the Zend form and the modern *Luhrás*, it must probably be read ***Lrohaspō**, the second **O** representing the sound *h*, to which *t* was reduced in due course by its position between two vowels.

The type of the Iranian **Wind-god** (running bearded figure with loose hair and floating garment) is very frequent on the bronze coins of Kanishka (fig. v).¹⁴ and is, artistically, perhaps the most original conception of the whole series. In his highly characteristic figure and the legend **ΟΑΔΟ** it was not easy to mistake **Vāta** the "strong Mazda-created Wind" of the *Avesta*. The form **ΟΑΔΟ** is of great interest to the grammarian, as it proves most conclusively that the change of intervocal *t* into *d*,¹⁵ which is ignored in the artificial spelling of Pahlavi (*vātō*), was an accomplished fact as early as the first century of our era.

⁷ Comp. *Chrysosmeas* in Hyde *Religio Felt. Persarum*, 1700, p. 191; and Rehd. *Dissertat. Miscellan.*, 1706 (Par. ii. p. 111).

⁸ *Cat.* Pl. xxvii. 24.

⁹ *Havishka*, Nos. 38, 40.

¹⁰ *Cat.* Pl. xxvi. 1.

¹¹ Comp. Kanishka, Nos. 11, 15 in *Br. Mus. Cat.*

¹² Comp. the *Apām-napāt* of Vedic Mythology.

¹³ *Abhandlungen* of the German Oriental Society, Vol. VII. 3, p. 150.

¹⁴ See *Cat.* p. 135.

¹⁵ Cf. Zend *vata* with Persian *būd*.

The flames rising from the shoulders of the god, whose most common type is given in fig. vi., would clearly proclaim him a personification of the **Fire**, so important for the Zoroastrian cult, even if the legend were open to any doubt. **ΑΘΡΟ**, with the variant **ΑΘΡΟΡΟ** on a gold coin of Huvishka,¹⁶ which represents the god in the very characteristic type of **Hephæstus** with hammer and tongs is directly derived from the Zend *âthr*, the weak form of stem *d'ar* "fire," and is, therefore, substantially identical with the Pahlavi *ô rš*¹⁷ and the Persian *adhar* "fire." The later form has survived side by side with the more common *âdash* (a descendant of the ancient nominative *âdars*), chiefly as the name of the 9th Zoroastrian month, which is transcribed by Isacus Monachus and other Byzantine chronologists as *âdêp*. In the Cypriote list of months, again, we find there is the older form *âdpa*, which is, in fact, a closer approach to **ΑΘΡΟ** of our coins. *Âtar*, the "son of Ormazd, the most great and beneficent Deity," is, in accordance with the all-important part which the sacred fire plays in the Zoroastrian cult, frequently addressed in the hymns and prayers of the Avestic ritual; and there is, besides, a special supplication (*Nyâish* V.) devoted to him. The tongs, with which **ΑΘΡΟ** is always represented, are mentioned among other instruments, required for the proper care of Ormazd's fire in a passage of the *Vendidad* (xiv. 7).

In a god of apparently similar character (fig. vii.), who on the gold coins, especially of Huvishka,¹⁸ is frequently represented as holding fire in his hand, Prof. Hoffmann has very properly recognized a representation of "the mighty kingly glory," the *karâna qarenô* of the *Avesta*. This deity's name reads **ΦΑΡΡΟ** or **ΦΑΡΟ** and corresponds to the Persian *farah*, a form being derived from *fara*, which is the phonetic equivalent of the Zend *farah* in the Ancient Persian of the Achaemenian inscriptions. The Zend *farah*-*spenta*, "the good glory," thus becomes, in a proper sense, the "glorious," the "glorious" Persian, **ΥΝΑΡΟΡΡΗΖ** on the coins of an earlier monarch, similar to the *Pharnaces*-

tis of Pliny, (vi. 25), has been recognized by the present writer¹⁹ in the derivative form *qarenâihaiti*, found as a river name in the *Avesta*. The "Kingly Glory," which is a Zoroastrian personification of lawful rule over Irân, is well characterized by the sceptre in the hand of **ΦΑΡΡΟ** on some types of Huvishka.²⁰ Its great importance for Zoroastrian mythology is indicated from the length of the *Yasht* (xix.), devoted to its praise, and the numerous legends which have gathered around the **Farr-i-kayân** in later Persian tradition.

The god **ΟΡΛΑΓΝΟ**, whom a type of Kanishka (fig. viii.) represents in the warlike attire of a Scythian, was first recognized by Benfey as **Verethraghna**, the Iranian war-god. The form **ΟΡΛΑΓΝΟ** presents us with a considerably older form of the name than the Pahlavi *Varahrân* (the *Οὐραράνης* of the Greeks), which, in modern Persian, is still further reduced to *Bahrâm*. **Λ** as a rendering of the sounds *thr*, or more probably *hr*, is of considerable interest for the history of Iranian phonetics. **ΟΡ** = *vere* will prove useful evidence in favour of the explanation we have to propose for **ΠΑΟΡΡΟΡΟ**.

In the bird, which appears sitting on the god's helmet, we recognize the bird **Vâreñjana** (or **Vâraghna**) of the *Avesta*, which was evidently sacred to Verethraghna, as the healing and protective power of a feather of that bird, if worn as an amulet, forms the object of special comment in the *Yasht of Bahrâm* (xiv. 34, sqq.). The eagle-like appearance of the bird on our coins seems to point to a closer relationship between the bird *Vâreñjana* and the **Simurgh** (*i.e.* * *šacnô moreghô* "eagle bird") of the *Shâh-nâmâ* legend than hitherto supposed.

With Verethraghna we may connect most appropriately the winged goddess, who appears in the distinct type of a *Niké* holding wreath and trophy-stand on some rare gold coins of Huvishka²¹ (fig. ix.). Her name, which, with a slight variation, is written both **ΟΑΝΙΝΔΑ** and **ΟΑΝΙΝΔΟ**, induces me, in conjunction with the very characteristic type, to identify her with the female genius, whose name, **Vanarîti uparatât**, "victorious superiority," is invariably

¹⁶ *Num. Chron.* 1887, p. 170.

¹⁷ *Num. Chron.* 1887, p. 170.

¹⁹ *Num. Chron.* Vol. XV, p. 21.

²⁰ *Comp. Crit.* Pl. xxviii. 26-29.

²¹ *Num. Chron.* p. 147.

coupled in all formulas and invocations of the *Avesta* with that of Verethraghna.²² We prefer this explanation all the more to the hitherto accepted theory, which identified **OANINΔA** with the star *Vanañt* (a male deity!), as it disposes effectually of the two difficulties involved by the latter. Both the female representation of **OANINΔA** and the *iota* of the name are now easily accounted for: the former by the feminine gender of *vanaiñti* (*vparatñt*) and the latter by the well-known phonetic influence of epenthetic *i*.

The type shown in fig. x. presents us with unusual difficulties. It is found only on a unique gold coin of Huvishka, now in the British Museum,²³ and is accompanied by a legend, which has sorely puzzled numismatists by its curiously contracted characters. The late Mr. Thomas identified the figure with an archaic representation of Artemis, but the supposed resemblance to the type of a gold coin of Augustus has been disputed by von Sallet.²⁴ The bow and arrow in the hand of the deity are, however, unmistakable and may give us, perhaps, some clue to its true character. Scanning the ranks of Zoroastrian deities, we cannot help being reminded of **Tishtrya**, the star **Sirius**, whose later name, **Tîr**, in Pahlavî and Persian actually means "arrow." That the word in this second meaning is etymologically derived from the Zend *tighri*²⁵ is on the one hand certain; on the other, there are very great grammatical objections against a direct derivation of **Tîr**, "Sirius," from the Avestic word **Tishtrya**. We are thus led to suspect a replacement of the genuine derivative of *tishtrya* by the more common word for "arrow," which, in popular conception, was evidently an attribute of the star. In a passage of the *Tîr-Yasht* (viii. 37) we find the swift flight of the star **Tishtrya** directly compared with that of an arrow.²⁶

The legend of our coin, to which we must now turn, has been read **ZEPO** by Mr. Thomas, and, with greater accuracy, **MEIPO** by Herr von Sallet. As, however, the latter's reading supposes a ligature between **M** and the following **EI**, which is unparelleled on Scythic coins,

we shall scarcely be blamed for not surrendering at once on this particular point even to so great an authority. Taking the combined characters **EI**, which are indeed perfectly clear, for granted, and viewing the preceding strokes as a single independent character, we have no difficulty in recognizing the letter **T**. Its rounded shape is in perfect keeping with the general character of Scythic epigraphy, and the explanation of its having so long escaped discovery is contained in the fact that **T** is exactly one of those few letters which by chance have not yet occurred on the Turushka coinage.

In order to obtain the link which is wanted in the chain of evidence for the identification of the god, whose name we now read **TEIPO**, we have once more to recur to the list of Cappadocian months. There we find the name of **Tîr**, the fourth Zoroastrian month, rendered in the two best MSS. of the second class by *Teipei*, a form to which the variants of the other two MSS. *Tîpi* and *Teið* (for ***TEIP**) may easily be reconciled. Whatever explanation we shall have to give in future of *Tîpñs* or *Tîpiñs*, the reading of the first class of MSS. and probably a much older form, it will not affect the conclusive evidence we derive from *Teipei* for the substantial identity of **TEIPO** with **Tîr**. It will be an object for future research to determine the exact phonetic stage in the transition from *tighri* to *tîr*, which has been recorded by the curiously identical spelling of the Cappadocian and Scythic forms.

In view of the philological evidence given above for the identity of **TEIPO** with the later name of **Tishtrya**, we need not attach much importance to the difficulty presented by the apparently female character of the type. The latter is evidently a mere reproduction of the Greek Artemis, which was a type ready at hand for an Indo-Scythian die-cutter wishing to exhibit in his type the characteristic emblems of the Deity, bow and arrow.

If the god who appears in figs. xi. xii., and in similar types on the gold coins of Huvishka²⁷ has hitherto completely escaped recognition, it was certainly not owing to want of clearness in the legend or of dis-

²² Comp. e.g. *Yasna*, i. 6; *Vespered*, i. 6; *Yasht*, xiv. 0.

²³ *Cat.*, pp. lxi and 144.

²⁴ *op. cit.* p. 202.

²⁵ Comp. *Enstithius ad Dionys.*, 994: Μηδοι γὰρ Τίγριν καλοῦσι τὸ τόξον.

²⁶ My attention was called to this passage by Prof. Darmesteter, who further suggests an etymological connexion between *tishtrya* (**tj-tr-yt*) and *tigh-ri* (*tîr*).

²⁷ Comp. *Cat. Pl.* xxviii. 17-19.

tinctive character in the type. The latter presents us in all its variations with the well-modelled figure of a warrior in full Greek armour, with helmet, spear and shield: which last, on a single specimen in the British Museum,²⁸ is replaced by a weapon resembling a hook. The legend reads on all well preserved specimens²⁹ with uncommon clearness **PAOPHOPO** (see fig. xi.), with the exception of Huvishka 106 (fig. xii.), where we find the variant **PAOPHOAP**. No attempt has yet been made to interpret this remarkable name either with the help of Iranian or Indian philology; but the application of a phonetic law, long ago recognized in other instances, will enable us to identify **PAOPHOPO** with the well-known name of a Zoroastrian deity.

In our opening remarks we had already occasion to mention **KANHPKI** and **OOHPKI** as the Scythic equivalents on the coins for the names **Kanishka** and **Huvishka** of the inscriptions and later texts. A comparison between these double sets of forms shows at a glance that Scythic **P** represents necessarily the same letter as the *sh* of the Indian forms. That this Scythic sound, which in the Greek writing of the Scythic coins was rendered by **P**, really bore the phonetic character of *sh*, can be conclusively proved in the case of a third doublet, **KOPANO** = **Kushan**, which was first identified by General Sir Alexander Cunningham as the name of the ruling Indo-Scythian tribe. **KOPANO**, on the obverses of the Turushka coins, follows immediately upon the name of the king, and corresponds in this position to **XOPAN** of the legends of **Kadaphes** (one of Kanishka's Scythic predecessors), which in the Ariano-Pali of the reverses is actually translated by *Kushanasa*.³⁰ That the latter form represents the genuine native pronunciation of the name cannot be doubted, since we have, as to the *sh*, the independent testimony of the Chinese transcript in the annals of the second Han Dynasty, which tell us that all the peoples under the Yuch-chi (Indo-Scythian) rule, when speaking of their sovereign, call him the King of the *Kuci-shuang* — i. e. Kushans.³¹

If we suppose that the phonetic or graphic

rule of **P** representing *sh*, which is so evident in the case of the Scythian words **KANHPKI**, **OOHPKI**, **KOPANO**, applied as well to the corresponding sound *sh* in the Iranian elements of the legends, we shall have no further difficulty in identifying **PAOPHOPO** with the third *amesha-ēpēnta* or archangel of the Zoroastrian creed, whose Avestic name, *Khshathra-vairya*, "perfect rule," becomes by ordinary phonetic changes **Shahrêvar** in Pahlavi and Persian. Of this latter form of the name **PAOPHOPO** is an exact transliteration. For the first **O** representing *h* we can adduce the evidence of **MIPO** (and perhaps **ΛΡΟΟΑΣΠΟ**), and for the second **O** = *ra* we have that of **ΟΡΛΑΓΝΟ** and the still more convincing proof of the variant **PAOPHOAP** (see fig. xii.), which actually presents us with the fuller spelling of the last syllable *var*.

Shahrêvar appears already in the *Avesta*, what he is *par excellence* in later Zoroastrian tradition, the genius of metals; and the representation of **PAOPHOPO**, in full metal armour, with Greek helmet and shield, is therefore in signal agreement with the cosmologic character of the Zoroastrian deity.

The MSS. of the *Hemerologium*³² give the name of the 6th Cappadocian month (corresponding to the Pârsî **Shahrêvar**) in various forms, **Ξανθηρί** (4 MSS.), **Ξανθυρί**, **Ξανθριόρη**, **Ξαθρι**, etc., all of which show a much closer approach to the original **Khshathra** (**Ξανθρ**, **Ξανθ**)-**vairya** (*ηρί* i. e., **Frîrî*, *vrî*), than **Shahrêvar** = **PAOPHOPO**. **Ξανθριόρη** is of peculiar interest as marking the transition from the Zend form, of which it still keeps the **Ξ** and **θ**, to **Shahrêvar** = **PAOPHOPO**. It may, however, be doubted whether the apparently more antique character of these Cappadocian forms is not merely due to learned archaicism, as in the case of the form *shat(r)-raûrō*, which is used in Pahlavi texts indifferently with the genuine *shahrêvar*.

Late Greek transcripts of **Shahrêvar** are **Ξαχρωῖρ** of Isaacus Monachus and **Ξαρεζαρ**.³³

PAOPHOPO, however, is not the only puzzle of the Indo-Scythic legends that finds its simple solution by the assumption that the character **P** may also represent the sound *sh*.

²⁸ Pl. xxviii. 19.

²⁹ For a wholly barbarous reproduction, see *Br. Mus. Cat.* Huvishka 104.

³⁰ *Comp. Cat.* p. 123.

³¹ *Cp. Journal Asiatique*, 1833, t. ii. 325.

³² See above, p. 90.

³³ See Hyde, *op. cit.* p. 191.

For although it is actually on the obverses of Kanishka and Huvishka that we meet with the most convincing examples of **P=sh** (**KANHPKI** = Kanishka, **OOHPKI** = Huvishka, **KOPANO** = Kushan), nobody seems to have yet thought of utilizing their evidence for the enigma in the rest of the legend!

The full legends on the obverses of the Turushka coins vary merely in the name of the king. They are found on the gold coins of Kanishka: **PAONANO PAO KANHPKI KOPANO** (fig. xiii.) and on those of his successor Huvishka: **PAONANO PAO OOHPIKI KOPANO** (fig. xiv.)

The only variants of any importance occur in the spelling of **KANHPKI** (once with the ending **KO**) and **OOHPKI** (written sometimes **OOHPKO**, **OOHPKE**, **OYOHPIKI**), and can easily be ascertained from the catalogue of Prof. Gardner. The bronze coins of Kanishka bear the short inscription **PAO KANHPKI**; but those of Huvishka bear a legend, which is materially identical with that of the gold coins, but, being written in a rather barbarous fashion, was formerly misread into **PAONANO PAO OOHPIKENOPANO**.³⁴ The corresponding legend of the rare Greek coins of Kanishka **BACIAEYC BACIAEΩN KANHPKOY**³⁵ leaves no doubt as to the meaning of **PAONANO PAO**. It has been considered an established fact since the days of Prinsep that Scythic **PAO** represents "King" and **PAONANO** the plural of the same word, but no satisfactory etymology of these forms has yet been offered. The proposed identification of **PAO** with the Indian *rāja* does not require a detailed refutation. We can neither suppose that the Scythians, so careful in their transcripts, should have persisted in ignoring the palatal *j*, nor that the quite modern Indian form *rāo* should have appeared at that date in the Pāli vernacular, which in the inscriptions of the very same Turushka kings still exhibits the full forms *mahārāja* *rājādirāja*.

As the simple **PAO** evidently expresses **BACIAEYC** (comp. the legend **PAO KANH-**

PKI of the bronze coins), we must look in **PAONANO** for a genitive plural, corresponding to **BACIAEΩN** of the Greek legend. However, not only does Indian grammar not account for the peculiar form of this case-ending, but also the construction of the phrase is distinctly un-Indian.³⁶ The order of its elements (genitive plural + nom. sing.) is, on the contrary, exactly that observed in the Iranian title *shāhan-shāh* (Old Persian *khshâyathiyānām khshâyathiya*), of which **ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΩΝ** is the regular representative in Greek.

PAO and **PAONANO PAO**, i.e. **shāh* and **shāhanānō shāh*, are, in fact, identical with the Iranian titles **Shāh** and **Shāhan-shāh**, which we can prove from other sources to have been the distinctive appellations of the Indo-Scythian rulers. Thus, in the Mathurā inscription³⁷ of the (Śaka) year 87 Vāsudēva, the **BAZO-ΔHO** of our coins, is called Mahārāja Rājātirāja *Shāhi*. Again, in the *daivoputra shāhi shāhānashāhi śaka*, mentioned in the Allāhābād inscription of Samudra Gupta, General Cunningham has long ago recognized a direct reference to the Turushka kings, called *devaputra*, "the sons of heaven," in their inscriptions. And, lastly, we find a late, but very distinct reminiscence of these Scythic titles in the Jain legend of Kālakāchārya,³⁸ which calls the princes of the Śakas, the protectors of the saint, *Sāhi* (*Shāhi*), and their sovereign Lord *Sāhānusāhi*.

The form *shāhi* (Prākṛit *sāhi*) still preserves in its final *i* a trace of the old ending *ya* (in *khshâyathiya*), which has disappeared in the modern Persian form *shāh*. The latter form is represented by our **PAO**, which, after the analogy of **MAO** = *māh*, we read *shāh*.

The Indian transcripts of the fuller title may furnish us with valuable help for the determination of the grammatical ending in **PAONANO**, which evidently forms a link between the ancient *khshâyathiyānām* and the *shāhan* of the Persian title, and here we find the Prākṛit *sāhānusāhi* of the Jain legend even more interesting than the *shāhānashāhi* of the

³⁴ Comp. *Cat.* p. lii.

³⁵ See *Cat.* p. 129.

³⁶ Comp. Prof. Oldenberg's Note *ant.*, Vol. X. p. 215.

³⁷ Published by General Sir A. Cunningham, Archaeological Survey of India, *Reports*, Vol. III. p. 35 and Plate xv. 18. Since the present paper has been sent to the press, M. Dronin has drawn attention (*Académie*, March 17, 1888) to what he calls "une élatante confirmation de la lecture *shāhanus shāh*," furnished by a

newly discovered inscription at Mathurā, which is dated "in the 7th year of the Mahārāja Rajasūrya *Shāhi* Kanishka."

³⁸ Published by Prof. H. Jacobi, *Zeitschrift* of the German Oriental Soc., Vol. xxiv. p. 255; first translated by the late Dr. Bhau Daji, see *Literary Remains of B. D.* 1887, p. 121.

Sanskrit inscription. Prof. Jacobi has already pointed out the striking analogy between the form *sāhānu* and the first part of the compound *devāṇuppiya*, which is the Prākṛit form in the Jain texts for the Pāli *devānaṃpriya* (Sanskrit *devānāṃ priya*), "dear to the gods," the well-known epithet of Aśoka. By this analogy, which proves the Prākṛit *-ānu* to be the representative of the older ending *-ānam* of the genitive plural, when placed in the middle of a compound, we are carried back from *sāhānu* to an older form, **śāhānam*. This form differs substantially from **PAONANO** only in the quantity of the second syllable, which in the Scythic form must be read *ha* not *hā*, as for the latter we had to expect **A** (comp. **MAACHNO**=Skr. *mahāśeṇa*). This variation, however, which was necessary in order to give to the Iranian word the grammatical appearance of an Indian genitive plural, is of special interest, as it gives a distinct hint as to the grammatical character of the ending in **PAONANO**. It is, in fact, the genuine Iranian ending of the genitive plural of thematic stems, *-ānām* in old Persian, but *-anām* in Zend, which we know to have been turned at a later stage of the language into the general plural termination *-ān*.³⁹ As this form and use of the ending occurs already in the earliest Pahlavī documents, the inscriptions of Shāpur I. (A.D. 240-270), we should feel some difficulty about explaining the preservation of a much older form of the case-ending in **PAONANO**, if we could not refer our readers to the similarly archaic forms, which the Cappadocian list of months has preserved of *Ābān*, the name of the 8th Zoroastrian month. The plural form *ābān* (Pahlavī *āpān*) designates the "waters," to which this month is sacred, and must be derived from a thematic form of the genitive plural in Zend, **apandām*. Benfey's MS II., from which we have already quoted *Ξανθρόρη* as the nearest approach to **PAOPHOPO**, gives us here, too, the best preserved form; *Ἀπονεμομ* represents undoubtedly **apandām māt*.⁴⁰

As the same list contains the comparatively modern form *Μηράν*, corresponding to

MIPO, it cannot date back to a much earlier stage of the language than that represented on our coins. We are therefore fully entitled to see in *μερο* essentially the same ending as in **NANO** of our legend. In both cases, the preservation of the full ending was probably due to its being protected by the following word (**PAO**, *māt*, *resp.*), which formed, in fact, with the preceding genitive a compound of the class called *juxtaposé* by French grammarians. Most of the other MSS. read *Ἀπονεμαμά*, *Ἀπονμεμαμά*, and similar forms, in which the transposition of *ν* and *μ* is easily accounted for by palaeographic reasons. Nor does the final **NO** of the ending **[PA]ONANO**, as compared with the *m* of the Zend ending *-anām*, offer any special difficulty, as various indications of Zend phonetics lead us to believe that the final *m* had in reality been merged into the nasal sound *ā*, to which the *m* of our MSS. was added only for orthographic reasons.⁴¹ This sound *ā*, the Indian *ām* or *am*, is fitly represented by **ANO**.

After the fresh evidence we have given above for the representation of *sh* by **P**, we should still be unable to explain this remarkable fact if we could not supplement our philological arguments by an epigraphic observation. It refers to the fact (nowhere noticed in numismatical accounts, but easily ascertained from the coins themselves) that the character uniformly read **P** is actually found in two different forms on our coins. One is the ordinary Greek **P**, in its minuscule form, and may be seen e.g. in **MIPO**, **ΦAPPO** (figs. ii. vii.); the other bear, a slight upward stroke, and, in this shape rather resembles an Anglo-Saxon **þ**. The latter form (which for brevity's sake we shall designate **þ**) seems constantly to be used for the *sh* of the obverses, but appears also sometimes in legends like **ΟΡΛΑΓΝΟ** (fig. viii.) **ΑΘΡΟ** (fig. vi.), where its value as *r* can scarcely be doubted, and where, therefore, the occurrence of **þ**=*sh* could be explained only by the assumption of a partial confusion of two characters, so similar in their appearance.

A minute examination of a larger number

³⁹ Comp. Prof. Darmesteter's *Études Iraniques*, I. 124

⁴⁰ Comp. *Ἀνεμα* = *ibn māt* of Isaacus Monachus.

and, as to *μ* = *ma*, the variant *Ἀπονεμαμ* in MS. VII. with *Ἀπονεμαμά* X.

⁴¹ Comp. Bartholomae. *Handbuch der altiran. Dialecte*, § 79.

of coins will, perhaps, supply us with distinct evidence as to the origin of this remarkable character $\text{𐬰}=\text{sh}$. I think I have found its prototype in the Greek **san** or **sampi**, Σ . This ancient sibilant, which survived in the later Greek alphabet only as the $\epsilon\pi\iota\sigma\eta\mu\alpha$ for 900, was, in fact, the only Greek character available for the expression of the sound *sh* of the Indo-Scythian legends. *San*, which we know from Herodotus (i, 139) to have been a letter peculiar to the Dorians, denoted in their dialect apparently a softer pronunciation of *s*, perhaps approaching that of *sh*.¹² The very name *san*, evidently derived from the Semitic שׁ , suggests for Σ a phonetic value similar to *sh* (compare the correspondence between name and sound in $\sigma\iota\gamma\mu\alpha = \text{sammakh}$). Our identification of the Indo-Scythian *sh* with the character *san* rests, however, in the main on clear paleographic evidence.¹³ The earliest form of *san* is **M**, found in Dorian inscriptions (Thera, Melos, Corinth). Coins of Mesembria and an inscription of Halicarnassus present us with a later form of *san* in the shape of **T**. As a numeral it appears in Greek papyri of Ptolemaic times in the form of \varnothing or **T**, from which the oldest minuscule form of *sampi*, 𐬰 , and the almost identical form of the Indo-Scythian *sh* can be derived with equal ease. The latter character may be seen with special clearness on the coins represented in figs. xv., xvi., xvii.

The Indo-Scythian coinage generally exhibits very cursive characters, which, in the absence of historical evidence (inscriptions of Kanishka and his successors date from A.D. 87-176), we should be inclined to assign to a much later period. The almost perfect identity of the Indo-Scythian *sh* with the early minuscule form of *san* is, therefore, easily accounted for. In the Indo-Scythian legends we had always ample proof of the fact that Greek writing remained in current use in India long after the destruction of the Greek kingdoms, but the vitality of Greek writing in the far East was, perhaps, never brought more forcibly before us than by the observa-

tion that the obsolete *san* was revived to denote the *sh* of the foreign conquerors. In future we shall have to read the names of the Indo-Scythian "Kings of Kings" as **KANH𐬰KI** and **OOH𐬰KI** and their royal title: **𐬰AONANO 𐬰AO KO𐬰ANO**.¹⁴

Both the forms **P** and 𐬰 are distinctly represented in the legend hitherto read **APΔOXPO**, which accompanies a female type, holding cornucopias, frequent on the coins of Kanishka and Huvishka (figs. xv. and xvi.). And the first **P** appears always in the ordinary Greek shape, the second always like 𐬰 . We must, therefore, all the more regret that the real name of this evidently very popular goddess has not yet been ascertained. Her identification with Ashis-vañhii, the Avestic goddess of Wealth and Fortune,¹⁵ is strongly recommended by the evidence of the type, which closely resembles that of the Greek Tyche; but we see as yet no way to reconcile her common name in later Zoroastrian tradition, Ashishvang or Ardishvang¹⁶ (both forms derived from Avestic *ashis vañhii*), with the form **APΔOX𐬰O**. Nor do the occasional variants of the coins,¹⁶ all of them with 𐬰 in the second place, afford any clue to this remarkable legend.

The same 𐬰 is twice met with in the legend **A𐬰AEIX𐬰O**, which we read on a rare type of Huvishka¹⁷ representing a male deity with radiating disk like **MIOPO**. The name, when read with due regard to the peculiar character of the two 𐬰 , might well remind us of the second Zoroastrian archangel, the personification of the "holy order" and the genius of the sacrificial fire, whose Avestic name, **Asha-vañishta**, appears in the substantially identical forms *Ashavahishtā* and *Artavahishtō* (*Artibahisht*) in later Zoroastrian literature.¹⁸ The latter form of the name is represented in the Cappadocian list by 'Aptaεττι—i.e. *Apta[F]ε[hi]εττι. We should, therefore, not hesitate to identify **A𐬰AEIX𐬰O**, i.e. **ashavahishtō*, with *ashavahishtō* of the Pahlavi, if any satisfactory

"daughter of Ahura," is nowhere met with in Zoroastrian literature.

¹² *Ash*, originally **reht*, appears again as *Ard* in Pahlavi; comp. Pahl. *ard* for Zend *ashvareta*.

¹³ See Cat. pp. 137, 138; **ΔOX𐬰O**—Huv. 19.

¹⁴ See fig. xvii.; Cat. p. 136.

¹⁵ For Pahlavi *rd*=Zend *sh* see Note 45.

¹² See Athenæus, xi. § 20.

¹³ Compare for the latter Dr. I. Taylor's *Alphabet*, ii. page 95.

¹⁴ This and the preceding paragraph appeared as part of a letter to the *Asiatic Researches*, Sept. 16, 1887.

¹⁵ First suggested by Prof. Hoffmann, his explanation of **APΔOX𐬰O**, however, is untenable, as the supposed original form of the name, *Ashvavahishtō*, "Asha-

evidence could be found for the phonetic change of *slt* into *khsh*, apparently involved by this explanation.

In the ranks of Zoroastrian deities the goddess **NANA**, very frequent on the coins of all Turushka kings (see fig. xviii.), cannot fairly claim a place. Although her cult is found in various localities of Iran, as over a large part of Western Asia, there can be little doubt as to her non-Iranian origin. She was certainly never recognized by the Zoroastrian Church, and the few instances of her amalgamation with the Avestic Anāhīrā, in the West and in a syncretistic age, are by no means sufficient to prove that her worship in Indo-Scythia was in any way connected with the Zoroastrian cult. It evidently preceded and outlasted the latter. Her name is found in the form of **NANAIA**³⁰ on the coins of an earlier king, who makes use of the type of Eueratides,³¹ and it still occupies a prominent place on those of Vāsudeva, from which all true Zoroastrian types have already disappeared.

We cannot enter here into a discussion of those few types, which cannot as yet be assigned to any of the various mythologies represented on our coins. The most puzzling

amongst them is perhaps the four-armed figure with the legend **MANAOBAFO** (see fig. six.), for which a satisfactory interpretation has still to be found. More Zoroastrian in appearance are the similarly obscure and rare types of Huvishka with the legends **ONIA?** (Nos. 95-79), **OΔHO** (94), **PIOM?** (109), and **ΩPON** (138, 139).

A comparatively large number of fresh types has been found during recent years on very scarce—sometimes even on unique specimens. We are, therefore, fully entitled to hope that further finds of Turashka coins, like that at Peshāwar, may yet reveal to us some new representations of Zoroastrian deities.

The testimony of the types and legends examined above is, however, in itself sufficient to establish the important fact that Iranian language and traditions, as well as Zoroastrian religion, were introduced into India by its Indo-Scythian conquerors. The eloquent and most authentic evidence of the Turashka coinage thus furnishes a safe starting-point for all future inquiries into that fascinating epoch in the history of the Aryan nations which witnessed the interchange of the Buddhist and the Magian influences between India and Iran.⁵²

A NOTICE OF THE ZAFARNAMA-I-RANJIT SINGH OF KANHAYYA LAL.

BY E. RHATSEK.

(Quoted from *Pr. 88*)

The third action was fought at **Aliwal**, where the Sikhs first stood firm, but being afterwards completely routed and flying in the direction of the river, had the sword in their rear and water in front. They attempted to cross, but thousands found their grave in it, and all the accoutrements they had left on the bank were taken by the enemy. In the fort to be taken, which took place at **Sabirāwan** (Sobroon), the celebrated warrior and commander **Singh** fought bravely, but was slain, on which a panic overcame the Sikhs and they fled in dismay. The Governor-General now ordered the army to cross the water and to encamp at **Kashir**; and

when this news reached Lāhōr, the **Mahārāja Gulāb Singh** was sent to meet the Governor-General, who received him with much kindness. A treaty of peace was concluded, to the effect that henceforth the territory situated between the Satlaj and the Byās was to belong to the English, to whom the Mahārāja (Dalīp Singh) was also to pay one hundred *lakhs* in ready money, but, in case of his inability to do so, to cede also Kashmir and the mountain districts adjoining it, retaining only the Pothohar on condition of rendering tribute to the English.

The rest of pairs having been examined, as above, the total marched to Table 2, and

¹⁰ Collected by Prof. Holmström and J. Holmström in Namur. *Die Gallenwespe der Gattung* (entomol. fasc. Vol. VII, part 3, p. 130 suppl.).

⁵⁰ As our Greek comes of it, ask for

^a Comp. von Salb. t. p. 110 p. 119

² We may mention, as an important point concerning the

[illegible]

meeting the **Maharaja Dalip Singh** on the road, entered the town with him. In order to make the Khalsi troops harmless they were disbanded, and there being no money on hand to pay the stipulated hundred *lakh*s of rupees, **Kashmir** was taken possession of by the British Government, but forthwith again bestowed upon **Gulab Singh** with the title of **Maharaja**. After this the Governor-General departed, leaving the troops in **Lahor**, to remain nine months for the maintenance of order: but when the said period of time had expired the **Maharaja Dalip Singh** was still apprehensive of disturbances, and made a request to the Governor-General to allow the troops to stay several years more, till he attained the age of majority and assumed the government. This was granted. At that time the **Raja Lal Singh**, being prime-minister, presided in the *darbhar*.

Gulab Singh now departed to take charge of his newly-acquired possessions, but on his arrival the **Nawab Shêkh Imamu'ddin** would not give him admittance, whereon troops were sent against him from **Lahor**, and this, being a convincing argument, had the desired effect. The **Nawab** immediately waited upon the noble Resident at **Lahor**, whom he informed that he had stood his ground in **Kashmir** by order of the *darbhar*, producing at the same time a letter to that effect, with the signature and seal of **Lal Singh**. His duplicity having thus become evident, he was removed from his post, and thrown into prison by the Resident. Neither did the **Maharani Chandan**, mother of **Dalip Singh**, fare any better, because she had manifested displeasure at the deposition of the prime-minister, and had meddled with the administration. She was accordingly separated from her son and removed to **Shêkhpura**, where she determined to avenge herself for the injury she had sustained, and succeeded in inducing a respectable inhabitant of that town, **Ganga Ram** by name, to tamper with the *khatwan* or chief butler of the English mess-house, who was bribed to poison all the officers through their food. The plot, however, having been revealed by a confidant of the messman before it could be executed, the **Maharani** was exiled to **Benares**, but her two accomplices, namely, **Ganga Ram** and **Kaph Singh**, suffered capital punishment.

At this time difficulties arose with **Multan**, the Governor of **Multan**, who delayed paying tribute to the English. Accordingly **Sir Frederick Currie**, the Resident at **Lahor**, despatched two English gentlemen, Vans Agnew and Anderson, with **Kaph Singh** to collect the tribute: but **Multan**, who was foolhardy enough to meditate war against the British Government, had them killed three days after their arrival. The troops of the Sikh *khalsa* as well as of the British Government marched immediately, and besieged **Multan**. Among the first named, however, the **Sardar Shêr Singh Atmarwala** proved a traitor, and intended with the forces under his command to join **Multan**, who was, however, either too wary or too proud to accept the proffered aid. **Shêr Singh** then hastened to **Peshawar** to meet his father, **Chhat Singh Atmarwala**, and the English, not minding his defection, continued the siege of **Multan**, which was, however, not taken till reinforcements had arrived from **Karachi**.²⁸ The reason for the diversion **Shêr Singh Atmarwala** had taken in his departure soon appeared, because he devastated the **Hazarah** and the **Peshawar** districts, joining with his father in extorting money everywhere from the wealthy and distressing the poor. Great numbers of turbulent and disaffected vagabonds also swelled the army of the rebels to such a degree that they were enabled to make prisoners of several English officers, and to besiege **Colonel George Lawrence**. A considerable force of Afghans had also arrived from **Kabul** to aid **Chhat Singh**, who was near the Indus, where he had joined **Durrani** and his forces having, in a short time, increased to double their number, he intended to occupy **Atik** and to present a formidable front to the English, but unwisely he did not do so. The British forces were ordered to attack **Chhat Singh** at **Ramgarh**, where a great battle took place, in which many thousands of Sikhs lost their lives, but **General Currie** was also killed. The second battle was fought at **Siddhah** and the third at **Chhatwan**, both of which the Sikhs were overthrown, and the fourth, which took place at a place now abandoned to the English, was a series of ambuscades and throw-grenade attacks on the Sikhs in the night. The rebels, finding this mode of warfare unsuccessful, were obliged to

²⁸ Multan fell in 1848 after a siege of 100 days.

position to continue their depredations, and even their Afghan allies fled in dismay to their own country, whilst numbers of fugitive Sikhs, whose lives had been spared, left the Pañjāb and found a new home in British India. After the English had thus for the second time restored peace in the Pañjāb, the Governor-General, who found it nevertheless impossible to trust the Sikhs with an independent government, decided on dethroning Dalip Singh, and accordingly

deprived him in St. 1905 (A.D. 1848) of his kingdom and his wealth. Being young and friendless, the nobles of his court quickly severed all connection with Dalip Singh, who was henceforth left alone. He remained a few years more in India, and was afterwards at his own request taken to England, where he is now established,⁵⁰ enjoying wealth and dignity by the favour of Her Majesty Queen Victoria, who is as kind to him as a mother.

THE VICISSITUDES OF THE BUDDHIST LITERATURE OF CEYLON.

BY THE REV. T. FOULKES.

The great influence which the **historical books of Ceylon** have had in the formation of the prevailing views of some portions of the ancient history of India, and especially of its chronology, makes it very desirable that as much as is possible should be known of the history of the literature to which they belong. The recent rapidly accumulating additions from other Buddhist literatures have taken the books of Ceylon out of the isolation in which they formerly stood, and help to throw light upon the legends of the Sinhalese; and they themselves contain an incidental record of the many vicissitudes to which this particular literature was exposed in the midst of the political and religious changes which mark the history of the island. The object of this paper is to bring together that scattered information, and to gather from it whatever it may teach us of the history of this interesting literature.

The authorities here referred to are the **Dīpavaṃsa**, the **Mahāvaṃsa**, the **Rājaratnā-kari**, the **Rājāvali**, and some other works which are occasionally quoted below, but need not be separately named here. Of these the *Rājaratnā-kari* and the *Rājāvali* are written in the Sinhalese language, and are of comparatively recent date.¹ The *Dīpavaṃsa* and the *Mahāvaṃsa* are in the Pāli language, and have both been supposed to belong to the 5th century, A.D.² But while there is good evidence in support of the claim of the *Dīpavaṃsa*, in its original form, to that early date, there are strong reasons for regarding the *Mahāvaṃsa* as

a work of a considerably later period. Turnour erroneously regarded these two books as identical, and was unable to throw off the idea, although he subsequently had the *Dīpavaṃsa* in his hands, and made an analysis of its contents.³ The text and an English translation of the *Dīpavaṃsa* were published in 1879 by Professor Oldenberg; and a retranslation of a portion of it by Mr. Donald Ferguson appeared in this journal, *ante*, Vol. XIII. p. 33ff. Oldenberg⁴ has shown that the *Dīpavaṃsa* quoted by Buddhaghôsa in the 5th century, A.D., differed in some details from the existing work of that name; still there is sufficient probability on the side of the supposition that the existing recension is at least a close recast of the original work. We have the *Mahāvaṃsa* in two different recensions: one of them is an English translation edited by Upham in 1833, and made for Sir Alexander Johnston, a former Chief Justice of Ceylon, and the other, published in 1837, by the Hon. George Turnour, of the Ceylon Civil Service. Turnour's translation has the great advantage of being accompanied by the Pāli text: but it extends only as far as the 38th chapter, bringing the history down no later than A.D. 477; while the Upham recension contains eighty-eight out of the hundred chapters of which the work consists, and brings the history down to A.D. 1319. The unpublished chapters⁵ continue the history down to the latter half of the 18th century.

The traditions to be considered in this

¹ *See* when this book was written.

² Upham's *Sacred and Historical Books of Ceylon*, 1833, pp. viii. xvi.; Turnour's *Mahāvaṃsa*, Introd. p. 1.

³ Hardy's *Meṃsa* of Buddhism, 519.

⁴ Turnour *op. cit.* Introd. p. liv.; and notes on pp. 256 and 257.

⁵ *See Journal of the Bengal Asiatic Society for 1838*, Vol. VII. 519 ff.

⁶ Introd. p. 9.

⁷ Turnour's *Synopsis*, Introd. p. xcii.

paper may be conveniently grouped under the following **five periods** :—

I. From the death of Buddha to the 1st century B.C., forming the so-called unwritten period.

II. From the 1st century B.C. to the 5th century A.D., forming the first written period of these legends.

III. From the 5th century A.D. to the subversion of Buddhism in Ceylon in the 11th century A.D.

IV. From the Buddhist revival in the 11th century A.D. to the second subversion of Buddhism in the 13th century.

V. From the second Buddhist revival in the 13th century A.D. to the present time.

Period I.

From the death of Buddha to the 1st century B.C.—This period is covered by the following legend of the *Dīpaṃśa* belonging to the time of king **Abhaya Vaṭṭagāmaṇi**, whose reign Turnour places in 104 to 76 B.C.⁶ “Before this time the wise Bhikkhus had orally handed down the text of the three *Piṭakas* and also the *Aṭṭhakathā*. At this time the Bhikkhus, who perceived the decay of created beings, assembled; and in order that the religion might endure for a long time they recorded (the above-mentioned texts) in written books.” The text of the Turnour recension of the *Mahāvamsa*⁷ is, with the exception of one unimportant word, precisely the same here as the *Dīpaṃśa*; but Turnour’s translation has introduced a new element into its meaning;—“The profoundly wise (inspired) priests had theretofore orally perpetuated the Pāli *Piṭakattaya* and its *aṭṭhakathā* (commentaries). At this period,” &c. His text says nothing whatever of the language of these scriptures; but, as is evident from his use of the capital letter *P* in his text in the word *Pālincha*, he has taken the temporal adverb *pālin*, “before this time” of Oldenberg’s version, which is opposed to the similar adverb *hānim*, “at this time,” of the succeeding sentence, to mean “the Pāli” language.

⁶ Oldenberg, 211; Turnour, *Mahāvamsa*, Introd. p. lxi.

⁷ Turnour, 207.

⁸ As Upham’s version (i. 219) has the same forced construction of the word *pālin* it is probably to be attributed to a native commentary.

⁹ Upham, I. 219; II. 43. The *Rājavalī* does not mention it.

¹⁰ Upham, I. 322.

¹¹ Upham, III. 161.

¹² Prof. Rhys Davids in *Encycl. Brit.* IV. 438.

As this is the first appearance of the Pāli language in the record, it deserves to be noted that it is brought in here quite by mistake.⁸ The Upham recension of the *Mahāvamsa* and the *Rājavalī*⁹ repeat the tradition with the addition of a few amplifying words; unless the words “for want of the Pāli books which contained them” in the former of these two authorities mean that these books had formerly existed and had been lost. By the 13th century this legend had acquired a still more distinct form. “The Buddha’s doctrines, being written in the Pāli language, which aforetime had been borne by heart by those great learned priests, had been committed to books at the time of the king Walagāma-abha.”¹⁰ And out of this has ultimately grown the still later tradition,¹¹ that this king Vaṭṭagāmaṇi was the inventor of the art of writing.

The tradition of the exclusively oral transmission of the whole of the Buddhist canon during the first five centuries after the death of Buddha belongs to the legends of the Southern Buddhists alone, which have their ultimate source in Ceylon: and assuming the *Dīpaṃśa*, quoted by Buddhaghōṣa, to be substantially the same as Oldenberg’s, this tradition was prevalent in the 5th century of the Christian era. Now these scriptures are about twice the size of our Bible,¹² and contain 1,237,000 verses of thirty-two syllables each,¹³ occupying 78,871 lines of *talipot* leaf manuscript from 1 ft. 7 in. to 3 feet in length.¹⁴ The enormous memory which the retention of this immense quantity of matter involves presents no difficulty to the Buddhists themselves, who attribute it to the supernatural powers possessed by their teachers during their age of miracles.¹⁵ Amongst European critics, Hardy¹⁶ declined to credit the statement, and, together with Prof. Max Müller,¹⁷ proposed to distribute the contents of the books among many memories. Turnour himself declared that it was “founded on superstitious imposture.”¹⁸ Professors Rhys Davids¹⁹ and Oldenberg²⁰ accept the tradition.

¹³ Upham, III. 30.

¹⁴ *Journ. As. Soc. Beng.*, VI. 509, 527. Turnour, Introd. (Appendix III.), p. lxxv.; Hardy’s *East Monach.* 167.

¹⁵ *Journ. As. Soc. Beng.* VI. 506. Turnour, Introd. p. xxxviii, xxix.

¹⁶ *Eastern Monachism*, 185, 186, 187.

¹⁷ *Sacred Books of the East*, X. Introd. p. xxv.

¹⁸ Turnour, Introd. p. lvi.

¹⁹ *Sacred Books of the East*, XIII. ²⁰ Introd. p. xxxv.

On the other hand, the traditions of the Northern Buddhists, including their Chinese offshoot, regard their canonical scriptures as a written literature preserved in books from Buddha's own days downwards. Buddha himself was a highly educated man according to the manner of the princes of his times.²¹ Instances are given of his epistolary correspondence.²² He was, moreover, an accomplished Sanskrit scholar,²³ and learned in the philosophies of the Brāhmanas. Although his teaching consisted largely of popular oral discourses, it by no means follows that he did not commit anything to writing; and there is actually one record, albeit a solitary one, of a manuscript being found at his death which had been written with his own hand.²⁴ We cannot ignore the statements which speak of written books in the time of Aśoka in the 3rd century B.C. and even earlier, nor set aside the long stream of indirect evidence which all along assumes and sometimes declares the existence of written books from the beginning. The legends of the Sinhalese themselves are without some substantial evidence of a more direct kind to the existence of this early written literature,²⁵ though it is subversive of the general drift of their other traditions: for as stated in one of their principal historical works that religious books formed a portion of the complimentary presents which Aśoka sent to the king of Ceylon;²⁶ and the names of some of these books, or of some others which **Mahinda**, the converter of Ceylon, then brought with him, and the use which he made of them in the course of his teaching, are distinctly mentioned.²⁷ The same authority²⁸ also refers to the existence of a portion of the *Sūtra-piṭaka* in Ceylon in a written form in the middle of the 2nd century B.C. It tells us that on a certain occasion king Dutthagāmaṇi assumed the preaching chair and began to read the book *Mahāvastu-sūtra* with a large assembly of monks for his audience; and it also tells us that this prince possessed other manuscripts besides

those of the Buddhist canon; for he "saw once amongst the writings of his ancestors a prediction delivered to his grandfather, king Dēvanīpiyatissa by the priest Mihidā-mahāterunvahanse." Again the *Dīpavaṃsa*²⁹ has a list of eminent Buddhist nuns on the continent of India, who were well versed in the *Vinaya* and other scriptures, from the foster-mother of Buddha downwards, and another similar list, headed by Saṅghamittā, king Aśoka's daughter, who came from India to Ceylon, and taught the whole of the Buddhist canon in Anurādhapura, from the 3rd century of the Buddhist era down to the days of king Abhaya in the dawn of the Christian era. It would be extremely difficult to understand this tradition on any other supposition than that the *Piṭakas* existed during the whole of this time in a written form, and that these written books were in the hands of these learned female teachers.

In the presence of this amount of direct and indirect evidence, which has, moreover, all natural probability on its side, we may be justified in regarding the improbable legend of the exclusively oral transmission of the *Tripiṭaka* as a fable put into a form which was calculated to satisfy the faith of the friendly and to silence the taunts of the unbelieving, invented to account for the earliest known traces of written books in Ceylon in the first century B.C. We may further regard the books originally brought to Ceylon as having been **lost or destroyed at some time between the death of Mahinda and this date**, through the carelessness of the local monks, or the hostility of the foreign rulers of the island, or both combined; for the legend itself admits the increasing ignorance and incapacity of the monks, and the history records the local trials of Buddhism during this interval. The *Dīpavaṃsa*, in which we first meet with the fable, was not written even in its earliest form until about five centuries after the times of which the legend speaks; and its plausibility would

Hart's *Miracles of Buddha*, 117. Rajendraloka's *Religious Literature*, 205, 213. Budd's *Biographical History of Buddha*, 68, 85ff. Rockhill's *Life of the Buddha*, 19.

Kaśka's *Indian Grammar*, 171. Rockhill, 59.

Hart, *Mir. Budd.*, 164ff. Max Müller's *Hist. of Ancient Sanskrit Literature*, 261. Weber's *History of Indian Literature*, 291. Bizandet's *Life of Gautama*, 15. *Pam. Hist. Bud.*, 155ff. Rockhill, 27ff. *Mitā* C. 101. Swamy's *Dharm. med.*, 25. Fyfe's *Burma*, 1, 172.

²¹ Kaempfer's *History of Japan*, I, 245.

²² See, e.g., *Journ. As. Soc. Beng.*, VII, 282, 322. Upham I, 43, 37, 38. Ward's *Hindoo* (3rd edition), II, 211. Bizandet, 120, note, 350 note, 360 note; *Sacred Books of the East*, X, Introd. p. vi.

²³ Ward's *Hindoo*, I, c. sup.

²⁴ Upham's *Mahāvastu*, I, 83. Lindley's *Fa Hian*, 37, 42.

²⁵ Upham, I, 90, 92, 94.

²⁶ *Ibid.* p. 200.

receive additional support from the well-known circumstance that in all ages both the students of the *Vêdas* and the disciples of Buddhism alike received their only legitimate teaching from the living voice of a master, even when written books were abundantly accessible.

The legends regarding the translations of the commentaries on the *Tripitaka* in the Sinhalese language, and more particularly the additional **Atthakathā** of Mahinda himself, belong to this period of the history of this literature. This tradition appears in the notice of Buddhaghôsha in the Turnour recension of the *Mahāvamsa*:³⁰—"The Sinhalese *Atthakathā* are genuine. They were composed in the Sinhalese language by the inspired and profoundly wise Mahinda." But the other authorities do not mention it at all. The more modern tradition is thus stated by Turnour:³¹—"The *Pitakattaya*, as well as the *Atthakathā* propounded up to the period of the third convocation in India, were brought to Ceylon by Mahinda, who promulgated them orally here—the *Pitakattaya* in Pāli, and the *Atthakathā* in Sinhalese, together with additional *Atthakathā* of his own. His inspired disciples and his successors continued to propound them also orally, till the age of inspiration passed away, which took place in this island (as already stated) in the reign of **Vattagāmini**, between B.C. 104 and B.C. 76. They were then embodied into books, the text in the Pāli and the commentaries in the Sinhalese language. The event is thus recorded in the thirty-third chapter of the *Mahāvamsa*, p. 207:—"The profoundly wise, &c. In the reign of the **Rāja Mahānāmo**, between A.D. 410 and 432, Buddhaghôsha transposed the Sinhalese *Atthakathā* also into Pāli. The circumstance is narrated in detail in the 37th chapter of the *Mahāvamsa*, p. 250. This Pāli version of the *Pitakattaya* and the *Atthakathā* is that which is now extant in Ceylon, and it is identically the same with the Siamese and Burmese versions." The tradition is thus made to rest upon two passages in

the Turnour recension of the *Mahāvamsa*. The former of these passages, however, neither mentions Mahinda nor his Sinhalese commentaries: on the contrary, it distinctly states that both the text and the commentary of the *Pitaka*, which were then committed to writing, were in the Pāli language.³² The whole legend, indeed, seems clearly to belong to much more modern times, when Sinhalese books had ceased to be a novelty. It reads by the side of the other legends rather as an elaborated invention than an original tradition; and with our present knowledge of the earliest literature of Buddhism, the question of the existence of these Sinhalese commentaries of Mahinda cannot claim any serious consideration.

Period II.

From the 1st century B.C. to the 5th century A.D.—This period opens with the restoration of the legitimate king **Vattagāmani**, **Valakan-abha**, or **Valagambā**, in B.C. 88,³³ after a period of usurpation by the Tamils of Southern India,³⁴ following a time of civil and religious commotion.³⁵ The loss of the earlier literature may safely be attributed to these disturbances: and the rise of the new literature, which now replaced it, was one of the results of the royal patronage of the seceding monks: "this king's new **Monastery of Abhayagiri**." The origin of this new literature is thus stated in the *Dipavamsa*:³⁶—"At this time the Bhikkhus, who perceived the decay of created things, assembled; and in order that the religion might endure for a long time, they recorded the three *Pitakas* and their commentaries (*Atthakathā*) in written books." The text of the corresponding passage of Turnour's *Mahāvamsa*,³⁷ as stated above, is precisely the same, with the exception of an unimportant particle, as the text of Oldenberg's *Dipavamsa*: as also apparently were the equivalent texts of Upham's *Mahāvamsa*³⁸ and the *Viṃśatīkāvamsa*³⁹ before the glosses were worked into them.⁴⁰ The language in which these books are assumed to have been written in those glosses is

sake of uniformity, from Turnour's Introduction, Appendix, p. lxi.

³³ Hsuen Tsiang, (Beal II. 247) tells us that the monks of the Abhayagiri studied both vehicles, and widely diffused the *Tripitaka*.

³⁴ Oldenberg, 211.

³⁵ Turnour, 27.

³⁶ Uph. I. 219 with 322.

³⁷ Uph. II. 13.

³⁸ See also Upham, III. 115.

³⁰ *Journal As. Soc. Ben.* VII. 332, 333. Oldenberg, 204ff.

³¹ Turnour, 251. ³² Intro. l. p. xxiv.

³³ See also Upham, I. 322.

³⁴ The *Rajavāṇī* (Uph. II. 224 with 226) puts his date considerably later.

³⁵ Oldenberg's *Dip.* 207, 211. Upham, I. 218. II. 43, 224. Turnour, 207, and Intro. p. lxi. All the dates in this paper, unless specially mentioned, are taken, for the

Pāli; but this, as already pointed out,⁴² is due to a palpable error. It is, moreover, at variance with the subsequent traditions that the Ceylonese *atthakathā* were written in the Sinhalese language, into which Mahinda had translated them. The language of the books of this **Abhayagiri revival** cannot be determined at present; though the drift of the present evidence points rather strongly towards Sanskrit, and the sources from which the new recension of the *Pitakas* and their commentaries was made must also remain over for future investigation.

The *Rājīvali* has no reference whatever to this remarkable event of Vattagāmaṇi's reign: although it relates the principal circumstances of his reign much like the other authorities. But, if the legend is a corrupted survival of the same tradition, it transfers the transaction to the reign of Vattagāmaṇi's successor, and converts it into the more commonplace formation of a central library, into which he gathered a good many Buddhist religious books, which were heretofore scattered abroad. "The next king was **Maha Dileyaw Tissa Rajah**.

penetrate at this time, and that others were obtained from Southern India. However this may be, we are here clearly in contact with the earliest written books of Ceylon, of which the local memory had any cognizance at the time when these legends were written in their present form.

To this period belongs the thrice-repeated destruction of the books of the **heretical Vaitulyas**, the first occasion being in the beginning of the third century A.D.⁴⁴ They made head again during the succeeding half century, and their books were again committed to the flames.⁴⁵ From the way they are spoken of, these books seem to have been numerous; but there is no clue to the language in which they were written.

The *Rājatarāṅkari*⁴⁶ states that king **Mahāsēna**, A.D. 275 to 302, caused a complete copy of Buddha's sermons to be written, which occupied 30,000 volumes; and that he deposited these books in a chest or bookcase made purposely to contain them. He also brought a learned monk from a foreign country to Ceylon, with a retinue of thirty-five com-

caused the books concerning the religion of Buddha to be collected and deposited in one place."⁴⁴ The *Dīpaṃśa* and the *Mahāvaṃsa* do not mention this library, and the *Rājatarāṅkari* omits this king's reign.

It is quite possible that some of these books were recovered from the monasteries of the

ing the monks of his own monasteries in the *Vinaya* and the Pāli language. None of the other authorities mention this legend. This circumstance takes something out of the weight of the record: and it may possibly be only an anticipation of the legend of Buddhaghôṣa, placed by mistake in the reign of

to the **hunter** who was there. The old woman gladly consented, and in due time the **wedding** of the hunter with the old woman's **youngest daughter** took place.

After living there for several months Rājāchā Masthiā said he must take leave of them to visit other countries. The old woman and others were loth to part with him, and more so the hunter. Nothing, however, could persuade Rājāchā Masthiā to change his mind. Thereupon the hunter said: "My dear *parlhān* and friend, if you must go, leaving me here, I agree only to please you. However, you must give me also some sort of sign, like the one you gave to our friend the carpenter, by which I can know if anything befall you and come to your aid if necessary." Rājāchā Masthiā gave him also a **plant**, and told him to water and take care of it. He said: "If this **plant withers** know that **I am ill**, and if it **dies** know that **I am also dead**." Thus saying he bid a loving farewell to the hunter and his bride and everyone else that had formed his acquaintance, to their great regret.

Thus the carpenter and the hunter were settled, and Rājāchā Masthiā now set out alone, his **sword** his only **companion**. He travelled for many days and then he came to another desolate city. There in the centre of the city he saw a huge *kalai* filled with oil boiling over a great oven. Rājāchā Masthiā thought: "I must wait and see what this means." He hid himself in a bush close by. He was not long there before he saw a tremendous big *rānkhas*, seven palmyras in height, come with a large *kāvūr*¹ on his shoulders, filled with men. When he neared the *kalai* of oil he threw all the men into it, and when they were all fried he ate them all one after another. When he had swallowed the last Rājāchā Masthiā came out of his hiding place and presented himself before the *rānkhas*. As soon as he saw him the *rānkhas* said: "Oh what a mouthful you would make. I only wish I had seen you before. However, though I have had enough, I must yet make a meal of you." On this Rājāchā Masthiā waxed wrathful, and with one stroke he stretched him on the ground where the *rānkhas* lay like a great mountain. On close examination Rājāchā Masthiā found on this *rānkhas*' waist a huge **diamond**.

In this city, too, there was a large **tank**, and suspecting that in this tank also might be a palace, Rājāchā Masthiā held the diamond to the water, and, lo! a **passage opened**. He saw a ladder, and by it he descended and found a very beautiful palace, and in it was a **maiden** of such beauty as never before met human eyes. Rājāchā Masthiā very soon formed an acquaintance with her, and they were so much taken up with each other's beauty that they resolved upon being **married**. The same day he left the subterraneous palace and put up on a high post a large flag with the words: "All the inhabitants of this city that have fled on account of the *rānkhas* can now come and live in their own houses unmolested. Rājāchā Masthiā has killed your dreaded enemy, the monstrous *rānkhas*." Now it must be known that the fame of Rājāchā Masthiā's prowess had reached this city long before he had left his father's house, though the citizens had never seen him before. As soon then as they saw the flag with Rājāchā Masthiā's name and the news that he had killed the *rānkhas* they all leaped for joy, and once more settled in their own country and houses. The city now looked beautiful and lively.

Some time after this Rājāchā Masthiā gave out publicly his intention of marrying the fair lady in the subterraneous palace, and the whole of the citizens said that it was the most proper thing for him to do, for they knew that his marriage would make him a permanent resident, and they would not to have to fear any more *rānkhases*, if there should be any. Grand preparations were going on for over a month, and then the wedding of Rājāchā Masthiā with the beauty of the subterraneous palace took place with all possible grandeur. All the inhabitants of the city were invited to the feast, and the rejoicings lasted for several days.

The newly married couple were next asked by the citizens to be their **king** and queen, which honour **Rājāchā Masthiā** and his bride gladly accepted.

They lived happily for some years, but, unfortunately for Rājāchā Masthiā, he was so taken up with his wife and the government of his kingdom that he **forgot** all about his

¹ Two baskets suspended at the end of a pole, and carried on the shoulders.

sword. It began to rust and Rājāchā Masthiā began to feel ill, and was daily losing his strength. The trees also he had given to his friends, the carpenter and the hunter, began to fade. All the care bestowed by them had no effect, and they made certain that something was wrong with Rājāchā Masthiā.

The carpenter at once set out in search of his friend, with the object of giving him some help if possible. After travelling several days he came to the city where the hunter had married and settled. He saw him also preparing to go on the same errand as himself and so they set out together. On the way the hunter told the carpenter how he had come to settle in that country, and thus they walked and walked for many days, and at last reached the city in which Rājāchā Masthiā was. But the difficulty was how to find him. So they both disguised themselves, the hunter as a *chanā-karmurūlā*,² and the carpenter as a *bāngrūlā*.³ In this disguise they went from house to house, and tried to gain some clue as to the whereabouts of Rājāchā Masthiā. At last, after great trouble and much delay, the carpenter (as *bāngrūlā*) got the necessary information from an old woman. Accordingly the carpenter and the hunter put aside their disguises, and, with the aid of the diamond possessed by the carpenter, they soon made their way into the palace of Rājāchā Masthiā.

They reached there just in time to be of use to him. He had become very weak and in a day or two he would have been no more.

Their first care on entering the subterraneous palace was to inquire of Rājāchā Masthiā as to what they could do to alleviate his sickness. He remembered his sword and told them to clean and sharpen it. They lost no time, but at once set about it, and as the rust began to disappear Rājāchā Masthiā gained strength, and as soon as the sword was sharp and bright Rājāchā Masthiā stood up and walked about with his usual vigour, as if nothing was the matter with him.

The carpenter and the hunter after some months expressed a desire to Rājāchā Masthiā to live with him. Rājāchā Masthiā, too, could not bear the idea of parting with them again, so he told them to go to their respective

countries and come back with their wives. They therefore went, and, taking their wives, bid a parting adieu to their many friends and acquaintances who regretted them very much.

When they reached Rājāchā Masthiā's country again they were appointed his highest officers in the State. And Rājāchā Masthiā, the hunter and the carpenter and their wives, lived together very happily for many many years like brothers and sisters, and were loved and respected by all the citizens, and when they were no more they were long remembered by them as their deliverers and benefactors.

RAJACHA MASTHIA.

Êk hôthā rāzā zô rāz karith asê êkê môthê rāzasthanāvar. Thiāch¹ m'ê hôthia murād paltani, âni saram j'm kâ kônāchan êuzavêl : pûn êkê vārthê kartham thô hôthā murād khamthi kam thô hôthā nipûthri, âni thiāchê mēliapatti kōni nôtham thiācham rāz chālvālā. Iā kartham rājāzûn murād dharam kēlā, guē asiān thari, garib dūblē razār karthin âni Parmēsôr aulādh dēl. Thavam murād tēpāsūm môthê mēthārpanān, râui rēli pūrmāsūm, âni tēp pūrliavar êk sôkrā zhailā. Thô sôkrā bēgin bēgin vārlā, âni rāzā âni sâri thiāchi raith khusālin bharlim.

Atham dhōnak varsam jēliavar êk sôkri zalmali, âni thiā vakthāsūm sārūm mānsam thilā lēkhūm lāglīm âni sôkriachi kōn dādhi kari masē, aurēthūk guē kōn thiālā bagith pūn nasat. Atham sôkrā lāhān hôthā kharā pūn thiāchēmanān dūbāu jēlā, âni iā kartham thiālā ailā kantālā. Barā zānthā zhailiavar, môthê sukāchē ūthē, ghōriavar basē âni zai rānān zauglān, âni thaim gauūliāch¹ m'ê dūdh māngthasē âni pithasē. Pailā thô sērbō dūdh pithasē, maghsīm dhōn sōr, âni aissam kartham kartham ailā manavar. Avram dādhi piūn piūn thô zhailā mazbūth, aurēthūk guē gharā zātham jēm thiāchē vāttēn ailam thauram thōr mōr karūn chūrā. Zhāram bōlā, ghāram bōlā, phōr thōr karūn bhūsā. Iā kartham thiācham lōkhāzūn naum thēvilam Rājāchā Masthiā. Gharā ailā barābōr thiāchē kāmbrīan zānūsim kōnālā emd i mas². Chākar emsīm thilā saugath guē khawācham thair hai, pūn thô āsrā jhēi masē kōnāchā âni thiānā sāng³ thiācham kam samālvā. Atham rājāchē sôkrizūn murād vakath

² Grain and parched rice hawker.

³ Bangle hawker.

bagiltham Rājāchā Masthālā gharā êtham gauñliānparsim, pūn thilā khabar nōthi guē thō thichā bhāu aissā. Thizūn thari bagiltham kaissā gharam ou dharam ou zharam, kain kōnsam bī thiāchē vāttēn āilam thē thō phōr thōr karūn chūrā karthasē.

Kain thēp jēlam āni rājāchi sōkri zhaili varādāvāchi, thavam rāzā, thichā bāpūs, āilā thichē mēre sāngathlam thilā kōnācham thari nāun sāngāvā, jāsim thi khūsi hōil varādāvalā. Atham thilā khabar nōthi guē Rājāchā Masthiā thichā bhāu karūnsim thavam thi bōthli āplēs bāpāslā :

“Mim varādēn asiāsīm zhō kā bārā āni bārā chauvis manāchā lōgdāchā gōlā thūkil āni bārā āni bārā chauvis kōs ūrvil thāsīāsīm.

Rāzā kabūl zhailā, āni chitiā pātviliā bijē gānvāchē rājānā āni pardhānānā aisiā guē kōni bārā āni bārā chauvis manāchā lōgdāchā gōlā thūkil āni bārā āni bārā chauvis kōs ūrvil thar thilā thiāchi sōkri d.l.

Atham thiā dhissālā ēk lōgdāchā gōlā bārā āni bārā chauvis manāchē ōzanāchā thairi kēlā āni maidānāmani thēvilā. Thiā dhissā murād rājē āni pardhān bēchē gānvāchē ailē bagāvā zar thiānchān thō lōgdāchā gōlā bārā āni bārā chauvis manāchē ōzanāchā thūkūnsim bārā āni bārā chauvis kōs ūrvāvēl thē āni aissam karūnsim rājāchi sōkrisim varādēl thē.

Sārē rājē āni pardhān zaurē aithē thauriāzūn thajviz kēlī thō lōgdāchā gōlā bārā āni bārā chauvis manāchā thūkūnsim bārā āni bārā chauvis kōs ūrvālā, pūn sārē dhamlī. Kōn kōnsānzūn thūkilā pūn kōnāchān ūrvavālā nāhin. Thavam thiās vakthān Rājāchā Masthiā dūdh piūnsim āilā, āni thō gōlā thiāchi vāttēn millā ; thavam thiāzūn thūkūnsim ūrvilā bārā āni bārā chauvis kōs ūpar.

Rājāchā Masthiālā khabar nōthi thō gōlā kalā hāllathā thē āni bēchē rājē āni pardhān kalā aithē thē, āni thiāzūn thari kōnāchi dādhi firīādhi nāhin thēvili pūn thō gōlā ūrvilā āni chālthā zhailā. Sārē lōkh ajebān bharlē guē kā sakthi āsēl.

Rājāchā sōkri ēkē jēnēlānsim bagithōthi. āni zaissam kā dēkhilam guē Rājāchi Masthiāzūn thō lōgdāchā gōlā bārā āni bārā chauvis manāchā thūkūnsim bārā āni bārā chauvis kōs ūrvilā, thi dhanvath aih Rājāchē mēre āni sāngathlam guē Rājāchā Masthiāsim varādēn. Sārē Rājē āni pardhān harrān zhailē ēm aikūnsim āni vichār karūm laglē guē aisi vārthā kasi vichēl

guē bainicham varād hōthēi bhāvāsim. Thichā bāpūs āni sārē bijē rājē āni pardhān thilā bōlum lāglē pūn thizūn kōnāchi vārthā kānvō jēthli nāhin ; thi bōthli : “Mim varādēn thē thiānsim varādēn. zari kā mānzā bhāu aslā.” Zavām bagithān guē thi nāhins aikē thavam thē bēchē rājē āni pardhān bōthlē guē “kain fikir nāhin, ēm varād nāhin karāl thē sōkri dhāsthi jēl āni marūn zail.” Aissā vichār karūnsim thiānzūm ēk dhis tharāvilā varādālā. Murād thairi challi dhōn thim mainē thavam ēm varād hau-sēsīm karāvā.

Rājāchā Masthiāzūn zaissam ēm aikathlam thaisā vērā zhailā, āni bilkul kabūl nāhin zhailā. Atham varādāchē thaurē dhis puram thiāchi tharwār jhēthli āni pāzvūm lāglā. Thō tharwār pāzvithā astham rājāchā ēk chākar thavārsim passār zhailā āni thilā bōthlā : “Kām, Pardhān Sāhib, sārē lōkh gūthliān, varādāchi thairi kartham, āni thūmi aurē sūsēgādh rēliā !”

Thavam Rājāchā Masthiāzūn vichārilam : “Kōnāchē varādālā thairi karthān ?”

Thiā chākrāzūn zavāb kēlā : “Kām, kōn pāthil guē tūmālā khabar nāhin zavām kā tūmcham pōthaiñcham varād hai āplēs baiśim.”

Thavam Rājāchā Masthiālā rāg āilā āni hiāzūn sāngathlam chākrālā thiāchē nadhrē-varsim niūgāvā, “nāhin thē” bōthlā, “piūzūn tākhin.”

Thō chākar ghārbarlā āni chālthā zhailā kām thē thilā khabar hōthi Rājāchā Masthiāchē sakthichi āni rāgāchi. Thō chakar jēliāvar thaurē vakthāsim biza ēk chākar passār zhailā āni Rājāchā Masthiālā tharwār pāzvitham bagūnsim thō bōthlā : “Kām, kā karthā, Pardhān Sāhib, tharwār pāzvūnsim, zavām kā sārē bijē lōkh thairi karthān varādālā ?”

“Kōnāchē varādālā thairi karthān ?” vichārilam Rājāchā Masthiān.

Chākrāzūn zavāb kēlā : “Kōn pāthil guē tūmcham varād āsūn āplēs baiśim tūmālā khabar nāhin aisi ?”

Rājāchā Masthiāzūn iā chākrālā thari sāngathlam ēk dam thiāchē nadhrē-varsim zavālā, “nāhin thē” bōthlā, “piūzūn tākhin.”

Thavam tharwār pāzvithā astham thairi chākar passār zhailā āni Rājāchā Masthiālā dēkhūnsim bōthlā : Kām, Pardhān Sāhib, sārē lōkhāchi dhūm dhūm challei thairi karāvā varādālā, āni tūmā khūsāl rēliā. Kāim zāthi tharwār pāzvūnsim ? Thavam Rājāchā Masthiāzūn

khabar kêlam guê kônâché varâdâlâ thairi challei. Thiâ chàkrân sângathlam guê varâd hai thiâcham âplês bainisim. Thavam nâktê tharwârisim thiâ chàkrâché angâvô jêlâ âni bôthlâ: "Niing mângê nadhrêvarsim êk dam, nâhin thê dharin âni piñzûn tâkhin." Bijê chàkrâché gathi ôh chàkar thari bilâ âni chalthâ zhailâ.

Atham Râjâchâ Masthiâchi tharwâr aisi hôthi guê thi zar kîtaili thê thô âzâri parêl, âni thi tharwâr zar môrli thar Râjâchâ Masthiâchâ jiu zail. Thiâchâ jiu hôthâ thiâ tharwârîn, thiâthô thiâchân thi tharwâr tâkvath nôthi. Thavam tharwâr jêthli, ghôriâvar baislâ âni jêlâ ghar dhâr sôrûnsim vin sângithlia aislâ ou bapâslâ ou bijê kônâlâ. Sâriânzûn bagilam thô jêlâ thê pûn thiâché manân guê dhardhis zâthê êthê thaissâ âz thari zail ail. Kônâché manân dhubâu nothâ guê atham thô bilkul évâchâ nâhin.

Thavam zâtham zâtham murâd lâmb pônêhlâ êkê rânân zanglân thavam êk pârdhi kallâ: thiâché khândhâvar hôthi êk bûndûk. Râjâchâ Masthiân hânk mârli thiâlâ âni vichârilam: "Arê, pârdhiâ, tûjê bûndkêcham vazan kauram hôil?"

Pârdhiâzûn zavâb kêlâ: "Pandhrâ man."

Thavam Râjâchâ Masthiâ bôthlâ: "Zar râth âni dhis tûm pandhrâ manâmcham vazan tûjê khândhâvar nêthês thar tûm môthâ p'lvân hais."

Thavam pârdhi bôthlâ: "Nâhin, nâhin, sâriân p'lvân hai êklâ Râjâchâ Masthiâ jâzûn bârâ âni bârâ chauvis manâchâ lôglâchâ gôlâ thûkilâ âni bârâ âni bârâ chauvis kôs ârvilâ, thô kharâ p'lvân." Thavam Râjâchâ Masthiâ bôthlâ: "Mim haiû thô Râjâchâ Masthiâ jâzûn bârâ âni bârâ chauvis manâchâ lôglâchâ gôlâ thûkânâsim ârvilâ bârâ âni bârâ chauvis kôs." Aissam bôlthûs thô pârdhi bôthlâ: "Zaiâm tûm zâsil thaiâm mim tûjê sangâthi ain. Melliâ tâlim tûlâ sôrauchâ nâhin."

Atham dhôgai, Râjâchâ Masthiâ âni pârdhi êkôt zâûn lâglâ, Râjâchâ Masthiâ ghôriâvar âni pârdhi pâm. Barê lamb jêlâ thavam Râjâchâ Masthiâlâ vâtlam guê aissam barâm nâhin diê guê thiâzûn ghôriâvar baissavam âni thiâchê dhôsthân châlâvam. Thavam ghôriâ sôrilâ âni dhôgai pâm zâûn lâglâ. Thavam murâd lâmb jêlâ thavam êk sûthâr bhêlâ; thiâchê khândhâvar hôthi êk karvath âni pîttivar êkê pôthliân thiâcham bizam sâman. Râjâchâ Masthiân hânk mârli thiâlâ âni khabar kêlam: "Arê, sûthârâ,

tûjê kârvathicham âni bijê sâmanâcham kauram vazan hoil?"

Sûthârâzûn bôthlam: "Mângê karvathicham vazan hai dâ man âni bizam sâman pânch man, saglam milûn pandhrâ man."

Thavam Râjâchâ Masthiâ bôthlâ: "Zar hâmês pandhrâ manâcham vazan tûm n' thês thar tûm môthâ baldhâr hais." Thô sûthâr bôthlâ: "Nâhin, nâhin, mânzam bal kaiûs nâhin Râjâchâ Masthiâché zôrâché pûram." Râjâchâ Masthiâ bôthlâ: "Mim haiû thô Râjâchâ Masthiâ." Êh sabbath aikthûs sûthâr bôthlâ: "Thar mim tûjê sangâthi êthaiû, âni âs' n tûjê m'rê marnâpâvath."

Atham thigaizan, Râjâchâ Masthiâ, pârdhi âni sûthâr zâûn lâglâ. Châl, châl murâd dhissânsim pônêhlê êkê gânvâlâ, pûn bagithân thê kâ: sârim gharam dharam ûgrim, thaissûs thari dhukânâ pûn, âni êk mânûs aissâ bagâvâ nâhin.

Râjâchâ Masthiâ bôthlâ: "Kâ évâsthâ gharlei thê âpûm âiâm rêûn âni bagûn." Êk môtham ghar hôtham thiâmani ôsthi kêli. Êkê dhukânâvarsim thiânâ jêm paizath hôtham thêthm jhêthlam thaiâm paisê thêvûnsim, rândhilam âni khaûnsim niûzlê.

Sakâlêhê ûthlê thavam Râjâchâ Masthiâ bôthlâ sûthârâlâ: "Pârdhi âni mim zâthauû firâvâ, tûm âz jêvan thair kar."

Sûthâr kabûl zhailâ, dhukânâvarsim dhâl, thûp âni bijâ jinsâ jhêthliâ paisê thêvûnsim âni rândhâvâ lâglâ. Zarâk vakthâsim dhân thair zhailam âni sûthârân êkê pâthravêlivar richvilam, thavam êk rânkhas thîn mâr ûnêh ailâ âni bôthlâ guê dhân dhê nâhin thê tûlâ khân: Sûthâr ghâbarlâ âni dhân dhilam rânkhsâlâ. Rânkhsâzûn khalam âni naipêth zhailâ. Sûthâr bizam dhân rândhûm lâglâ thauriân Râjâchâ Masthiâ âni pârdhi ailê âni khabar kêlam jânthâr thair zhailam ka. Atham sûthâr bagithôthâ guê Râjâchâ Masthiâlâ khabar nâhin milâvi guê êk rânkhas ailâ âni êklâm dhân rândhilam thêthm khalam thiâthô thiâzûn bizam kaiû nimith sângathlam. Atham thigaizan ghâûsarê âni rândhûnsim khalam âni niûzlê.

Bijê dhissâ ûthlê thavam Râjâchâ Masthiâ bôthlâ pârdhiâlâ: "Âz tûm gharâ rê âni rândh, mim âni sûthâr zâthauû firâvâ." Aissam bôlûnsim dhôgai jêlê firâvâ. Pârdhiâzûn dhukânâvarsim jêm paizath hôtham thêthm hârlam âni rândhâvâ lâglâ. Dhân sizlam âni pâthravêlivar richvithei thavam rânkhas ailâ âni dhân mângûm lâglâ. Pârdhi pailâ dhêth nôthâ pûn rânkhas bôthlâ:

“Déthês kam kâ sângthês; dhan dhê nâhin the pailâ tûlâ khâm.” Pârdhi bilâ âni rânksâlâ dhân dhilâm. Rânksân dhân khalâm âni nai-pêth zhailâ. Atham pârdhiâlâ samaz milli guê sũtharâlâ thari rânkhas bhêtâvâ ailaşêl âni thiathô kâl ôkath zhailâ dhân rânđhâvâ. Pârdhi maghârî dhûkânâvâr jêlâ, dhâl thũp hârlâm âni bizam dhân rânđhũn lâglâ thavam Râjâchâ Masthiâ âni sũthâr ailê âni jânthâr mângũm lâglê. Sũthârân dhian pônchvilâm guê rânkhas êunsim dhân khâlaşêl. Pârdhiâzũn eujilâm guê Râjâchâ Masthiâlâ sângên kâ vichlâm thê thê thiâlâ râg ail. thiathô thiâzũn bizam nimith sângathlâm. Thigaizan ghaũsarlê âni dhân rânđhũnsim khâlâm âni niũzlê.

Thisrê dhişşâ úthũnsim Râjâchâ Masthiâ bôthlâ: “Âz tũmim dhôgai zâ firâvâ, âz mânji pâli rânđhâuchi.” Pârdhi âni sũthâr bôthlê: “Pardhân Sâhib, âmalâ barâm nâhin dhişê guê tũmin rânđhũnsim âmalâ khâvâlâ dheavam; thiathô ânimim dhôgai pâli karũm êk dhis âr rânđhâvâ.” Êh aissam bôthlê kam thiânâ khabar guê Râjâchâ Masthiâ rânksâlâ bagil thê thiânâ saram hôl; pũn Râjâchâ Masthiâ bôthlâ: “Mim pardhân hâin thê khari vârtâ pũn tũmchi pâli aili thavam tũmin tũmcham kâm kêlâm. âz mânji pâli hâi âni miũzũn rânđhâvâ pãijê. Âiam mim pardhân nâhin, âpũm thigai sârkê, thar tũmim zâ firâvâ.”

Pârdhi âni sũthâr bagithân guê kam bizâ âpâi nâhin thavam dhôgai jêlê firâvâ. Râjâchâ Masthiâ jêlâ êkê dhûkânâvâr, thanşim dhâl, thũp, âni jêm kâ bizam pâizath hôtham thũn jêthlâm âni rânđhâvâ lâglâ. Dhân şizliâvâr êkê pathravêlîvar richvilâm, âni zaissâ kâ vâş êthûş rânkhas ailâ âni dhân mângũm lâglâ.

Râjâchâ Masthiân vichârlâm: “Kôn hâis tũn, ân kâ pãijê tûlâ?”

Rânkhas bôthlâ: “Mim kôn hâin thê tũn vichârũm nakô pũn dhân dhê êk dam, nâhin thê pailâ tûlâ khâm.”

Pũn Râjâchâ Masthiâ kam bilâ nâhin, âni bôthlâ: “Thaurâ vakath p.k. maghşim tûlâ mim dhân dhethain.” Aissam bôlũnsim Râjâchâ Masthiâ j-lâ, tharwâr harli âni êk fatkâşim rânksâchê dhôn tũkrê kêlê. Êk dõngar zaissâ zaminîvar parlâ. Atham Râjâchâ Masthiâ lagla thiâlabarabôrthapâşava. Thavam thiârânksâchê kambrêvar thiâchi nadar lâgli. M'rê j-lâ thê bagitheî thê kâ, êk môthâ hirâ kallâ. Thô hirâ j-thlâ âni zavâşâ thavam mêr şim hôtham êk thalam. Thiâ hirâchâ úz r kullâ thuâ thaliâlâ

thavam êk rasthâ zhailâ. Râjâchâ Masthiâ jêlâ mare âni êk nisan bagili. Thiâ nishivarsim thê doulâ âni pônchlâ êk môthê havelin. Thiâ havelin hôthi êk môthi şô'ivanth şôkri. Thişim murâdsar vârtâk-li, thavam bagitheî guê parabi âni sũthâr êthin khâvâlâ thiathô thê ailâ êrthi. Gharâ j-lâ âni nivâth r-lâ zaissam kâ kaius nâhin vichlâm. Thaurê vaktâşim pârdhi âni sũthâr ailê. Khâlâm pilâm âni maghşim Râjâchâ Masthiâzũn khabar k-lâm pailâ sũthârâpar âni dhusrun pârdhiâpar guê pũrchê dhişşâ jântharâlâ vakath kam zhailâ. Thiânzũn şumâr k-lâ guê Râjâchâ Masthiâlâ khabar parli rânksâchê thiathô thiânzũn âplis gũniâ sângathli âni map mângũm lâglê. Râjâchâ Masthiâ samazla guê sâriânechi sakthli kam sârkî nâhin thiathô thiânzũn thiânâ map k-lâm pũn sângathlâm guê dhusrun aisi labâri sângũm nakô. Maghşim thiânâ nêlam âni rânksâchâ mûrdhâ dhâkrilâ.

Atham maghşim Râjâchâ Masthiâzũn êk môthâ ûnch bantâ garilâ âni thiâ bantîâvâr livilâm: “Sârê lôkh jê kâ jêlian iâ gâũvâşim thiânzũn b'đhâşthin iâvam âni thiânchê gharâũmani riâvam. Tũmchâ dhũşmin, rânkhas, mârâ Râjâchâ Masthiâzũn âni thô atham zhailâ râzâ iâ gâũvâchâ.” Thanechê gâũũkariânzũn thê sabath vâchithûş khusi zhailê âni êũnsim âplêş gharan rênũ lâglê. Sârê lôkhâzũn thô mûrdhâ rânksâchâ bagũşim âjebân bharlê âni Râjâchâ Masthiâlâ sukh âni môthi hâiâth mângũm lâglê.

Atham thauram thêp rêlê iâ gâũvâşim. Râjâchâ Masthiâzũn êk dhis sũtharâlâ nêlam thiâ thaliâmani hâv-li bôthi thaitân thiâşokrichê nadrêvar. Atham thiũ dhôgvam êkê bijâlâ aşm khusi zhailim guê Râjâchâ Masthiâlâ kâklũth vâtlî sũthêrâchê âni thiathô thiâ dõganebâin varâđ tharâvilâm. Murâđ dhis thavam thaliâri kêli. Şirê gâũũkariânam âũũthilâm âni murâđ dhis thavam hous moz sâriânzũn kêli.

Iâ gâũvâşim dhonak varşim rênũşim Râjâchâ Masthiâzũn eujilâm guê zavam bijê gâũũ bagivâ: thiathô thiânzũn sũtharâşim âni thanechê bar-kôşim âlêus kêli. Thaneşim mârşim khusi nôthim guê Râjâchâ Masthiâzũn zavam, pũn thaneşim thiâlâ hõlârva h nôtham.

Zâvâchê pũram Râjâchâ Masthiâzũn hũkũm kêli guê sarê thiâ gâũvâchê lôkhâzũn sũtharâlâ manivam thanechê rãjâ parman. Thiâzũn thari thiâ sũtharâlâ thô lura dilâ kam guê thiâlâ garaz lôthi thiâchê thuâ thaliâmani ghar

hótham thiāmāni évā zāvālā. Sūthārālā mōtham dhūk vātām Rājāchā Māsthiālā sōrāvā. Murād thiāzūn bōthlām thiālā thiāchē sangāthi zāvā karthām pūn Rājāchā Masthiāzūn kain kām dilā nāhin. Zavām kā bagitheī guē Rājāchā Masthiā nāhin aikē thavām thō bōthlā thiālā : “ Pardhān Sāhib, tūlā sōrāvā mānā zaissam kā ēk mārān zhailiūn, pūn zavām kā tūji khuśi hāi guē mīmzūn iā gāuvān riāvān āni rāz chālvāvām tūjē nāvim mīm rēthaiūn tūji khuśi karāvā. Pūn kōnsē vakthān tūlā kōnsam vait vichēl thar mālā kāsī khabar milēl? Thiāthō mānā kain thari ēk khūn dhē jiāvar mālā tūjē barē vaitāchi khabar parēl aśi.” Rājāchā Masthiāzūn ēkē zharāchā ēk mārā dhilā āni thiālā sāngathlām lāvālā. Thiāzūn bōthlām : “Zar kōnsē vakthān ōh mārā kōmailā thar samaz guē mīm hairān laiūn : āni zar ōh mārā mēlā thar samaz guē mīm thari mēlūm.” Aissam bōlūnsīm Rājāchā Masthiā āni thiāchā bizā dhōsath, pārdhi, chālthē zhailē. Sārē lōkhāzūn ānsvām galilūn ēuzūn guē athām maghāri thiānsīm ekē bijānsīm bhēt nāhin hōvāchi.

Rājāchā Masthiā āni pārdhi dhōgai jēlē murād lāmb. Murād dhis chālē āni ēkē gāuvālā pōnchlē. Thaiām ēkē dōkriché gharā jēlē āni birādh māngathlām. Dōkrižūn hausēsīm dhilām. Athām iā dōkrichiā hōthūā sāth sōkriā, disūnān mōthiā sōbivān. Dākhi sōkriché pōttān hōthā ēk sarap, āni zar kōnī mānās mīmzām thiāchē mērē thō thō sarap rāthchā bēnē mīgē āni thiālā khai. Iā karthām thi dōkri hōthi murād khañthi. Dōkriché mērē Rājāchā Masthiāzūn khabar kēlām kain aśi khañthi lōthi thē āni thizūn sāngathliāvar thiāzūn sāngathlām guē thō sāngēl thaisām karil thē thō thilā barām kacil. Rājāchā Masthiāzūn sāngathlām harivā sath man gāuvānchām pāt, sath man sākār āni sath man thap. Dōkrižūn jēn. sāngathlām hōthām thēm thiābōthōp harām āni Rājāchā Masthiāzūn dhilām. Rājāchā Masthiāzūn ēk bauli keli āni rāthchā thiā sōkrichi mērē thēvūl, āni dōkriā sāngathlām “khabardō, mērē ōnō nōkō.” Aissam sāngānsīm thō ēkē bazūlā ūbā rēla nakie tharwānsīm. Bari rāth zhaii thavām thō sarap mīgē āni tōchā marla thiā bauliāvar. Zavām la bagith i guē gōr lēgthēi thavām akhā mū, gad, thiā bauliāvar p nēlām k lām āni laglā khavāli : thiās vakthān Rājāchā Masthiān ēkē sōkrišīm pānch sa tūkē k lē āni thānsīm khūślā. Dōkrižūn bagithiās dhāivātā aili āni

ēkē tūkriālā hāth gāthlā thavām Rājāchā Masthiāzūn hāthāchē dhōn tūkrē kēlē. Athām thō hāth āni thiā sarpāchē tūkrē jēthlē āni jēlā.

Bijē dhissā Rājāchā Masthiān bhēz jēthlā ēkē vāidachā āni dōkriché dhārāsīm ēnsīm zōrāsīm bōthlā guē vāriā pōtālā vōkhan dhēn, kōnāchā hāth bith kāplāśēl thē baisvin āni bijē āzār barē karin. Dōkriché ēkē sōkrižūn aikathlām āni jēli āni aisa sāngathlām guē ēk vāid ailai thē aissā aissā bolthēi. Thavām dōkrižūn sāngathlām thiālā varāvā. Rājāchā Masthiā aila, ail pail lāvilām āni thiā dōkrichā hāth baisvilā. Dōkri khuśi zhaili āni bōthli : “ Bol tūlā kā paijē thē ; j m mānghēl thēm mīm tūlā dhēn.” Thavām Rājāchā Masthiāzūn sāngathlām thō kōn hōthā thē āni bōthlā : “ Mānām tuzām sōnām nānām nōkō, pūn tūji sōkri jilā mīmzūn barām kēlām thi tūzūn dhāivī paijē mājē dōsthalā, iā pārdhiālā.” Dōkri kabūl zhaili āni thaurē dhissām pārdhiāchām varād zhailām thiā dōkriché dhāklē sōkrišīm.

Kain thēp thaiām rēnsīm Rājāchā Masthiāzūn vichār kēlā zāvāchā bijē gāuvā bagāvā. Dōkri āni bijūn mānsām khañthi zhailiūn. Murād bōthlām thiālā pūn thiāzūn kain kām nāhin dhilā. Thavām pārdhi bōthlā : “ Pardhān Sāhib, tūm zāthēs pūn mānām barām nāhin vātē, pūn mīm rēn āmām tūji khuśi karāvā. Mānām thari kain khūn dhē jiāvar mānām samjēl tūjē barē vaitāchām.” Rājāchā Masthiān ēkē zharāchā ēk mārā dhilā pārdhiālā thari āni thilā sāngathlām : “Zar ōh mārā cōmēl thar samaz guē mīm āzārī parlām āni ōh mārā mēlā thē samaz guē mīm thari mēlūm.” Aissam bōlūnsīm Rājāchā Masthiā jēlā ; sārē thiāchē dōkhē vōlkhēchē khañthi zhailē.

Rājāchā Masthiā mīgēlā ēklā, thiāchē sāngathlā thiāchē tharwār, āni iā khūris bizām kōn nāhin. Chāl chāl jēlā murād dhis thavām āni pōnchlā bijē ēkē gāuvālā. Thiā gāuvān thari sūm gharam dharam āni dhūkāmām hōthim ūgrin pūn ēk githā jiu nāhin bagāvā. Thaiām thavām baglā ēk mōthi kalāi thēlāsīm bhali ēkē chūliyo. Rājāchā Masthiāzūn vichār kēlā guē thailām pēkhavām āni bagāvām kā dhōng hai thē ; āni ēkē zharāmāni thō likālā. Thaurā vakath nāhin jēlā thavām ēk mōthā rānkhas, sath mār ūch, ālā ēk kāvar jēthi thiāchē khāndiār mānsamīm bhali āni thūm mānsām thiāzūn ghañthiūn thiā kalamāni āni ekiā magari ēk saghlām khaliūn. Thiāzūn sēvtāchā mānās khālā thavām Rājāchā Masthiā ēnsīm

thiächê samôr ûbâ rêlâ. Thiâlâ bagithûs rânkhas bôthlâ: “Âh! kaisâ hausêsâ ghâns zhailasthâ, pûn kain fikir nâhin, zari kâ minzûn aurim mânsam khaliân thari tûlâ mim khâin.” Aissam bôlthûs Râjâchâ Masthiâlâ râg ailâ âni êkê fatkiâsim râs ghâthli rânkhsâchi êkê dôngrâchê gathî. Maghsim thô lâglâ thiâlâ thapâsâvâ; thavam thiächê kambrevâr thari êk môthâ hirâ millâ. Atham aiâm thari hôtham êk thalam. Râjâchâ Masthiâlâ vâltam guê iâ thaliân thari ghar asêl. Thavam thiâzûn thô hirâ dhâkrilâ thiâ thaliâlâ. Thaliâvar thiâ hirâchâ ûzêr parthûs êk rasthâ zhailâ, âni êk nisan bôthi thivarâsim thô deulâ êkê gharan. Thiam thiâzûn bagili êk sarûp âsthi, asî sôbivanthi guê sârê duni-manî thaâi nôthi. Râjâchâ Masthiâsim âni thiâsim hâmsai parli âni thim êkê bijialâ asim khuâi zhailim guê thiânzûn vichâr kâlâ varâdâvchâ. Thiâs dhissâ thô bônâ ailâ âni êk bauthâ gârilâ âni thiâ bauthiâvar livilam: “Sârê lôkhâzûn kôn jeliân iâ gâuvâsim thiânzûn vin dhâsthisim iavam. Tûmehâ dhûsmin rânkhas thiâlâ mâllam Râjâchâ Masthiâzûn.” Atham thiâ lôkhâzûn Râjâchâ Masthiâlâ baghilam nôtham pûn thiâlâ sârê lôkh ôlkhithasath kâm thê thiânzûn aikathlatham kaissâ thiâzûn bârâ âni bârâ chauvis manachâ lôgdâchâ golâ thûkûnsim bârâ âni bârâ chauvis kôs ûrvilthâ thê. Thavam thiânzûn thiâ bauthiâvar liviltham thêin vâchithûs khuâi zhailê âni ailê âni âplês gâuvân vâghûm lâglê.

Kain thêp jêlam âni Râjâchâ Masthiâzûn sârê raithêlâ sangathlam guê thiâchi khuâi hai varâdâvâ thiâ thaliânchê sôkrisim, âni sâri raith thari khuâi zhaili kâm guê thê samazlê guê Râjâchâ Masthiâ varâtlêl thê thô gâuv sôrûn thô kadhûn zâvâchâ nâhin, âni êkhadhiâ bikhadhiâ bizâ rânkhas aslâ thari thiânâ kain dhâsthi nâhin parthi kâm thê Râjâchâ Masthiâ thiâlâ mârthâ. Atham khûb tharâsim murâd dhis thavam varâdlâ kânvilâin, thêin varâd môthê khûsâlin karâvâ. Sârê lôkhâlâ ânûthilam âni murâd dhis thaspar sâriânzûn khâlâm pilam âni haus môz keli.

Maghsim thiâ gâuvâchê lôkhâzûn Râjâchâ Masthiâpar âni thiächê baikôpar mângnam mângathlam guê thiânzûn hovam râzâ âni rânî thiâ gâuvâchi, âni thim dhôgam thari kabûl zhailim.

Murâd thêp thavam thim rêlin khûsâlin pûn atharâ kâ zhailam? Râjâchâ Masthiâcham dhiân miân saghlam hôtham thiächê baikôvar âni

râzasthanâchê karbârâsim âni tharwâr pâzvâchi viâdh keli nâhin. Thavam thi tharwâr kitai-zûm lâgli âni Râjâchâ Masthiâ thari lâglâ vâit passâr hôvâlâ. Thaâim thari thim zharam jim kâ sûthârâlâ âni pârdhiâlâ dhilthim lâvâlâ thim lâgliin kômâvâ. Sûthârâzûn âni pârdhiâzûn simpilim, khânam ghâthlain, âni murâd kuidâdh keli thari thim dhissân dhis lâgliin marâvâ. Thavam thiânzûn sûmâr kâlâ guê Râjâchâ Masthiâlâ, kain thari vait vichlam âni niûgâlê thiâlâ sôdhâvâ zâvâlâ. Pailâ niûgâlâ sûthâr âni châl châl murâd dhissâsim bhêtlâ pârdhiâlâ. Thô thari thair hôthôthâ Râjâchâ Masthiâlâ bagâvâ zâvâlâ. Atham dhôgai lâglê zâvâlâ. Vâttê pârdhiâzûn sangathlam sûthârâlâ kaissam Râjâchâ Masthiâzûn êkê dôkrichê sôkrilâ, jichê pôttân hôthâ êk sarap, thilâ baram kêlam âni sêvtâs thicham âni thiâcham varâd k lam. Thavam châl châl murâd dhissâsim pôchhlê Râjâchâ Masthiâchê gâuvân, pûn thô kain rêthasê thê thiânâ khabar kasî milêl. Thavam thiânzûn bhêz firvilâ: pardhi zhailâ chanâkur-murîwâlâ âni sûthâr bângriwâlâ. Aissam karûnsim gharôghar firûm lâglê âni khabar jhêum lâglê Râjâchâ Masthiâchi. Sêvtâs sûthârâlâ, bângriwâliâchê bhêzân, êkê dokrilâ bângriâ bharitham, khabar milli. Thavam sûthârâzûn âni pârdhiâzûn bhêz sôrûnsim jêlê âni sûthârâchê mêrê hirâ hôthâ thô dhâkrilâ thiâ thaliâlâ âni ânmani dêulê.

Môthê nasib Râjâchâ Masthiâchê guê thiâ vâkthavê pôchhlê kâm thê thô hôthâ agdhi marnâchê kântâvô, âni kônzânê êkê dhôn dhissân mêlasthâ.

Thê dhôgai, sûthâr âni pârdhi pôchhlâ barâbôr pailâ khabar kêlam Râjâchâ Masthiâpar guê thiâncham kain ûpai karvavêl kâ thiâchâ âzâr barâ karavâthô. Thavam Râjâchâ Masthiâlâ viâdh parli thiächê tharwârâchi âni thiânâ sangathlam pâzvâlâ. Thâbôrthôb dhôgai ghañsarlê âni tharwâr pâzvâlâ lâglê. Zaisi thi tharwâr sâp hôvâlâ lâgli thaissâ Râjâchâ Masthiâchê rôgh halkâ hôvâlâ lâglâ, âni tharwâr agdhi tharwâr sâp hôthûs thô thari ûthlâ âni châlûm lâglâ zaissam kâ kain nâhin vichlam thiâlâ.

Sûthâr âni pârdhi thaurê mainê thaim rênsim Râjâchâ Masthiâlâ bôthlê guê thiânchi khuâi hai thiächê mêrê rêvâlâ. Râjâchâ Masthiâlâ thari murâd bhârim vâttûm lâglam thiânâ sôrâvâ, thiâthô thiâzûn sangathlam thiânâ gharâ zâvâlâ âni thiânchê baikânâ jêthi êvâlâ.

The jêlê thiànchê gâuvâlâ âni thiànchâ baikâ jêthi niingâlê, âni sârê thiànchê dhâsath âni dhôsath murâd khandi zhailê.

Zavam kâ thê dhûsrûn pônêhlê Râjâchâ Masthiâchê gâuvâlâ thiânâ Râjâchâ Masthiâzûn tharâvilâm kârbâri. Atham Râjâchâ Masthiâ,

pârdhi âni sûthâr âni thiànchâ thigzani baikâ êkê mêrê rêliûm khušâlin âni zaisê kâ bhâu âni baini parman vâparliûm thiànchi haiâth thavam. Sârê lôkh thiânâ mân manthâ karûm lâglê; âni zavaûi kâ mêlê thavam murâd thêp thaspar sârê lôkhâzûn thiànchi viadh kêli.

CHINGHIZ KHAN AND HIS ANCESTORS.

BY HENRY H. HOWORTH, F.S.A.

IVa.

[This chapter was unfortunately lost in transmission to India. It has been re-written and ought to be inserted between chapters IV. and V.]

I have mentioned how Yessugei on his death-bed summoned Munlik and bade him tell his brothers and other relatives what had happened. That faithful servant first went to bring Temujin home, the boy having stayed behind with Dai Setzen, the father of his betrothed, when her father set off home again. He did not disclose his master's death to Dai Setzen; it might have been dangerous to do so. He determined to keep silence about it until he had informed Yessugei's own relatives and merely said that Yessugei was very anxious about his son Temujin and had sent him to fetch him.¹

During the spring of the same year, while the two widows of Hanbakhai or Anbakhai, named Orbo and Sokhatai, were offering sacrifices to their ancestors,² Khoilun Yessugei's widow arrived too late and was not presented with any of the sacrificial meats.³ Khoilun complained of this, claiming that as her husband was dead and her children infants, she was entitled to share in the meats and by refusing

her they were cutting her off from the family. Orbo and Sokhatai resented her language, saying she only spoke in this way because Anbakhai was dead,⁴ and suggested that they should abandon her.

The next day Tarkhatai Kiriltukh and Todoyan Girtse⁵ raised the camp and abandoned Khoilun and her children. The old servitor, Charakh,⁶ agreed with them, but Todoyan said, "The deep water has dried up and the precious stone is broken. Wherefore should we cling together?" They not only did not heed Charakh's words but they thrust a spear into his back.⁷

Temujin went to visit Charakh when lying wounded in his house. The latter said to him: "They have carried off the people collected by thy father, when I expostulated with them they wounded me." Temujin wept and then withdrew.⁸ Khoilun now mounted her horse, and having put her standard at the head of a lance went in pursuit. She managed to stop half the fugitives, but this was only for a short time, for they speedily left her and went and joined the Taijuts.⁹

Khoilun, being thus deserted, shewed zeal and endurance in bringing up her children, collecting fruit and digging up roots to feed

¹ *Yuan-shih'ao-pi-shih*, p. 37.

² *i.e.* to those of the Royal family.

³ These sacrifices were great bonds between members of the same family or tribe, and the meats offered at them were sanctified by having been partaken of by the spirits of their ancestors, and were duly divided among those at the feast. ⁴ *i.e.* unable to defend them.

⁵ They are called Anbakhai's sons in note 85 to the *Yuan-shih'ao-pi-shih*. Rashidû'd-din makes Tarkhatai the son of Adil Khan, son of Kadan Taisi, son of Anbakhai. D. Olsson, l. 39 note. The same author explains Kiriltuk to mean coyote-son and envoys, while Abulghazi, who calls him Barghuta Kiriltuk, explains the latter word as meaning an old man who is becoming deer-pod. Erdmann, p. 218, note 2. Todoyan is called Todoyan Khoilun in the *Hoang Yuan*, Todoyan Khoilun in Hyem's translation of the *Yuan-shih'ao* and Tulun Kahum by Rashidû'd-din. According to the latter he was the son of Kadan Taisi and was therefore the brother of Adil Khan. Erdmann, 218, 259 and note 38.

⁶ *i.e.* Munlik, called Jerkh Abagan by Rashidû'd-din, Chalkhan in the *Hoang Yuan*. In the previous chapter I have written his name Jarakhai.

⁷ Rashidû'd-din says wounded him in the knee with an arrow.

⁸ *Yuan-shih'ao-pi-shih*, p. 37.

⁹ Rashidû'd-din calls the standard used by Khoilun *bag* or *bagh*. The name is said to be derived from the Chinese *bag* or *ba*, but it occurs in the famous old Persian work the *Fihrâd* in the form *bag*. The Chinese emperors used such a standard made of a yak's tail stained red and fastened to a spear, and they gave it as a symbol of authority when conferring the royal dignity upon the Chiefs of the Turks and other border tribes. Among the Western Turks and Persians it has been regularly used as a symbol of military authority, and as the yak is not found there a horse's tail is generally substituted. Occasionally the actual piece as much as 4 feet long. The famous Imperial Mongol standard of later days consisted of nine white yak tails. There was also a standard of black tail called *alpa* by Samang Sitzen, from this Erdmann gives *alpa*, the name by which the Russians distinguish the plumes on Russian helmets. Liemann *Tamashan*, etc., p. 259, and note 39. D. Olsson, p. 1, note 19.

them with. When they were grown up they all had indications that they belonged to a royal lineage, and, although scantily fed, grew up strong and were famous wrestlers. We are further told they made a fishing rod of thorns, and also made nets with which they caught fish for their mother in the river Onon.¹⁰ On one occasion when Temujin was fishing with his brothers Khasar, Bektur and Belgutei, he secured a golden-coloured fish. Bektur and Belgutei took it away from him, and Temujin and Khasar complained of this to their mother. She remonstrated¹¹ with them for quarrelling thus, and remarked that beyond their own kin they had no friends, just as a horse has no lash but his own tail, adding that if they continued to quarrel they would not be able to revenge themselves on the Taijuts. Temujin and Khasar were offended that their mother did not side with them, remarking that if they were to be always treated thus, how were they to live together? Both brothers then threw the door-curtain violently aside. Bektur at this time sat on a hillock pasturing his horse.¹² His two offended brothers crept up to him, one from before and the other from behind, and determined to shoot him. Bektur saw them, and asked them if in lieu of the necessity of revenging themselves on the Taijuts they were going to treat him like you would a hair in the eye or a mole on the face. He entreated them at least to spare Belgutei, and then drew himself together, sitting with his feet drawn up and awaited their arrows. They shot at him from before and behind, until he was dead. When Khoilun heard of what they had done she remarked: "You, Temujin, at your birth held a clot of black blood in your hand; you two are like dogs biting your own ribs, like hawks falling on the rocks, lions boiling with unconquerable hatred, serpents swallowing your prey alive, eagles swooping at a shadow, great fish which devour their prey silently, mad camels biting the heels of their own young, wolves seeking their food in snow and wind, ducks¹³ who, unable to drive away their young ones, eat them, tigers whose ferocity you cannot restrain. What

have you done? How came you to act thus when you ought to have been thinking of revenging yourselves on the Taijuts?" Thus did Khoilun rebuke her sons.¹⁴ Some time after this Tarkhutai Kiriltuk remarked that Temujin and his brothers who had been abandoned by himself and his people had grown up like wild animals, and taking some companions with him he went out to ascertain what had become of them. Temujin and his mother on their approach were afraid and went into the forest, where he made an arbour out of some branches for a residence while he hid his two little brothers and sister, Khachuin, Temuge and Temulun in the cleft of a rock. Khasar was out shooting and encountered the Taijuts, who shouted to him: "We only want your eldest brother, the others we do not want." Temujin overheard this and fled into the wood. The Taijuts went in pursuit as far as the hill Ter-guneh. Temujin disappeared in the thick of the wood which was thereupon surrounded by the Taijuts. After he had passed three days there he determined to leave it, but as he was setting out the saddle fell off unexpectedly, upon which he said to himself, "Granting that the saddle will sometimes fall off when the girths are tight—How can it do so when fastened with a breastband also?" The misfortune made him think that heaven was against his trying to escape. He turned back again and stayed another three days, but just as he was leaving the wood again he noticed that a large white stone, the size of a *yurt* or tent, had fallen down and closed his path. This seemed another interposition of providence, so he turned again and spent another three days. All this time he had eaten nothing. Finally he determined to go out rather than die there. He accordingly took his knife with which he made arrows and cut a path round the stone which had fallen across the road, along which he led his horse and descended the hill. The Taijuts who were on the lookout caught him and carried him off. Tarkhutai ordered that the Chinese wooden collar known as the *cangue* was to be put upon him, that he was to be taken round to all the various encampments, and

¹⁰ *Yuan-chao-pi-shi*, 37, 38.

¹¹ The *Altan Topchi* says that on another occasion Bektur took a bullfinch which Khasar had shot.

¹² *Altan Topchi* says he was looking after eight goldings.

¹³ Chinese ducks are the symbols of fidelity.

¹⁴ *Yuan-chao-pi-shi*, p. 38-40. *Ssanang Setzen*, p. 65. *Altan Topchi*.

kept 24 hours in each. In this way he passed the time till the 16th day of the 14th month which was a celebrated holiday; on that day the Tajjuts made a feast on the banks of the Onon. At sunset, when they scattered to their several houses, they ordered a weak-headed lad to keep watch over Temujin. The latter seized the opportunity and struck the boy with the cangue or wooden collar, knocked him down and then ran away. Having reached a wood by the Onon he entered the river and concealed his body, keeping his face only above water. The Tajjuts having learnt of his escape, commenced to search for him in the clear moonlight. Meanwhile Sorkhan Shira of the Sukluz tribe, who was one of the searching party, noticed him and said to him: "It is be-

cause you show sagacity like this that the Tajjuts hate you—I will not betray you." He passed on and presently as the Tajjuts returned he said sarcastically to them: "You have lost a man in the daylight and now you try and find him again in the dark! Let us search re-ground where we have not already been, and if we don't find him let us renew it again to-morrow. Where can a man go who is encumbered with a cangue." During this second search Sorkhan Shira again passed close to Temujin and said to him: "We are finishing our search for the night and shall renew it to-morrow. Take advantage of this and go and find your mother, and if you meet any one don't say you have seen me."

(To be continued.)

CORRESPONDENCE.

PAMER—BOLOR—OXUS

SIR.—Regarding the significations of the words Pamer, Bolor and Oxus given in note 737 of Vol. IV. of the *Indian Notes and Queries*, I should like to make the following remarks:—

The word Pamer or Pamêr seems to signify, at present at least, an uninhabited highland Steppe, and is perhaps a Turko-Tartaric word. The *Bam-i-dunyâ*, roof of the world, contains several *pâmirs*; for instance, there are the Great, the Little, the Yashil, the Khargûsh, the Riangkul and another *pâmirs*. If *pâmîr* be an Indo-Germanic word, it should be considered that *bâm*, Persian for roof, was, in old Persian, *bân*; and regarding the word *ar* for mountain, old Persian *ara*, Zend *hara*, Pehlvi *har*, "it must remain doubtful whether the Zend *hara*, which is only used for the great mountain which surrounds the world is an Indo-Germanic or Semitic word." The Turko-Tartaric word *ar*, *ar*, also means 'high,' and its derivatives form height, column, hill, heap, &c. Is Pamer then from Indo-Germanic or Tartarian?

The word Bolor is not, as the note 737 says, "rare, or name of the lofty plateau," it is the name of a mountain chain further east and the name of a district, south or south-west of it. The name however is not known to the natives, or only to a few, who are Dards, and who call Baltistan Bolor.¹ If Bolor be an Indo-Germanic name it could hardly be *bala* + *ar*; *bala* in old Persian was probably *barâ*,² in Zend it was *barâ*; (*cf.*

Alburz, the modern form of Hara-ber-zaiti) Is Bolor therefore Indo-Germanic or Tartarian?

It seems to be generally accepted that Turanian appellations for localities in the Pâmîr regions cannot date before the 6th century of our era, if therefore the names Bolor and Pâmîr can be found at that time we might suppose them to be Indo-Germanic.

The old Persian name for the Oxus was **Wakh, Wakhs, Wakhshû** pronounced Ukhshû, **Wakhshâb**, and **Wakh-ab**, actual names of tributaries of the Oxus. **Wakhshû** was the name of a part of Badakhshân; it joined Khatlân and was famous for its horses. **Wakh, Wakhan**, is the name of a district east of Badakhshân. **Oxus** is the Greek transcription of the Indo-Germanic **Wakhshû**, Polybius 10, 12 writes it **Oxos**; Strabo, Ptolemy, and many other writers write **Oxus**. **Aq-û** (white water) is a modern Turanian appellation of a small tributary of the Oxus.

The Bolor Chain is the Qizil-Yart Chain of Hiyward, at the eastern end of the Pâmîrs, and runs meridionally from the Thian-shan on the north to the Kuen-lun on the south; it is also called Baqat-dagh, the Cloud-mountain.³ Its northern part, the Muzdagh-lee-mountain, joins the Thian-shan; its southern part is called Tchinging-Onon-mountain. The district Bolor⁴ is placed by the *Sung-shu-tsu-ki* about 44° west of Pekin and in 1,137° 12' days west of Sar-i-Kol and 20 days to the north of Kâbul.⁵ Its southern part was Balti, the present

¹ See e.g. *Pamirs and Samarkand*, p. 50.

² *Compendium*, I. 11. 31.

³ *Compendium*, I. 11. 31.

⁴ *Compendium*, I. 11. 31.

⁵ *Compendium*, I. 11. 31.

⁶ *Compendium*, I. 11. 31.

Baltistân.⁷ Hiuen Tsiang in the 7th century⁸ calls the Indus the Poliu (Bolor) river, and speaks of the Kingdom of Pololo (Bolor) as lying south of Pomilo (Pâmîr) valley.⁹ The *T'ang* history, speaking of the year 747, mentions Pulu (Balti?) and Pomi (Pâmîr?).¹⁰ Ulugh Beg in his *Tables* places Bulâr or Bulâreh in Long. 105° (from the Fortunate Islands) and Lat. 37°. The *Zubdet-et-Tewârikh* of Haidar Râzi mentions under A. H. 933, when Sultân Sa'ûd Khân sent his son Rashid Sultân into Kâferistân, that Bulâr (Bolor) was situated west of Yârkand and Kâshghar, south of Badakhshân, east of Kâbul and north of Kashmîr: that is, it stands for the present Kâferistân, or part of it. The Oxus is mentioned as Kwai-shui (the Wakh river) in Sze-mat'sien's *Shi-ki* of the second century B.C.¹¹

A. HOUTUM-SCHINDLER.

Tehran.

A NOTE ON JUDEO-PERSIAN LITERATURE.

SIR.—The Jews of Persia, scattered about in Yezd, Kermân, Shirâz, Isfahân, Kashân &c. do all their writing and correspondence in the Persian language but in the Hebrew character.

They have in this way preserved some Persian works not otherwise now to be met with. So far, however, I have found little else than stories and tales in the Persian language written in the Hebrew character. The Jews have the *Dîvân* of Hafiz, Sa'dî, the *Khamsch* of Nizâmî, and the prose and metrical works of other popular Persian authors in their own character. They also have a Persian metrical translation of the *Pentateuch*, which they say was written by order of Nâdir Shâh: and a few other works in Persian and Hebrew combined. I hope to communicate the result of further investigation in this subject

S. J. A. CHURCHILL.

MISCELLANEA.

PERSIAN LITERATURE UNDER THE QAJARS.

RUSTEM UL HUKEMÂ.¹

One of the most prolific, and yet but little known, contributors to the Literature of the early troubled dawn of the dynasty which has for over a century now successfully assumed the sovereignty of the once mighty empire of the Persians, is Muhammed Hâshim-ul-Musavi-us-Safavi, styled Rustem-ul-Hukemâ.

Few biographical details relating to this writer have been discovered. Almost all that is known of him is that which is gleanable from his own literary remains, according to which we learn that in A.H. 1203, in his twenty-third year, he undertook a journey to Bukhârâ in order to visit his maternal uncle, Hâjî Bâlâ Khân, the Divân Begi: an undertaking which he does not appear to have carried out in its entirety. The Rustem-ul-Hukemâ adopted Asef as his *takhallus*, or poetical *nom de plume*. His father's name was Amir Muhammed Hassan, and the family originated from Shirâz, where Asef was born.

He has a *Dîvân* containing *qasîdahs* in honour of Karân Khân, the latter Land rulers and Fath Ali Shâh, etc. It begins

ای قادر ذوالجلال دانا
وی مالک بی وزیر و مدنا

I expect there is a mistake, or rather a clerical error, in the second hemistich, which should read *نظیر* instead of *مدنا*.

Some *ghazels* begin

ای کاخ جلال تو از این طارم عینا
بیشک بیناران درجه ارفع واعلا

The *Dîvân* also contains *qat'ahs*, *targîbands*, and *rubâ'is*. Following the *ghazels* is a prose tract, in which the author states that in A.H. 1208 he was in his sixty-eighth year, which is no doubt a clerical error for twenty-eighth year. In this tract he further mentions that he collected together his poetical effusions composed prior to this period, and named the *Dîvân* *مجموعۃ الفضایل*. The collection was made at Isfahân.

Besides this work the Rustem-ul-Hukemâ composed the following *کلزار حکمت*, which can scarcely be described better than in the author's own words:

خلاصه اوامر و نواهی کتب آسمانی یعنی صحف
و رد و بارید و توریت و نبیجات و انجیل جلیل
و زبور برنور و فرقان منظر کریم مجید و خلاصه
علوم حمسه یعنی علم معیشت و علم طب و عام دین
و علم نجوم و علم تعبیر در آن مذکور و مندرج
است بطریقه سوال و جواب

In his fourteenth year he composed a *شرح* *فارسى القیة*. One of his more important works

⁷ See the *Geogr.* of Ptolemy, VI. 13, 3.

⁸ See Yule, *J. R. A. S.* VI. 114.

⁹ *Id.* p. 117.

¹⁰ Dr. Baskin, *J. R. A. S.* XII. 530.

¹¹ King-mall, *J. R. A. S.* X. 207. XIV. 75.

¹ This writer's translation remains as a manuscript at his own request. It differs from that adopted in this journal generally.—Ed.

is the *رستم القوارین*; a history of Shâh Sultân Husain Safavî, Mahmûd Shâh, Ashref Shâh Afghân, Shâh Tahmâsp, Nâdir Shâh, 'Alî Shâh, Ibrâhîm Shâh, Azâd Khân Afghân, Abû'l-Fath Khân Bakhtiârî, 'Alî Murâd Khân Bakhtiârî, Fath 'Alî Khân Afshâr; the conquest of Isfahân by Muhammed Hasan Khân Qâjâr; reign of the Vakîl, Karûn Khân Land, and 'Alî Murâd Khân Land; reign of Bâqer Khân Dehqân Khurâskânî Isfahânî—who only occupied the throne for a few days—continuation of the Land dynasty under Jafer Khân and Lutf 'Alî Khân to the reign of Âqâ Muhammed Khân Qâjâr.

Following the above are two imitations of well-known works, *viz.* *كلشن* in imitation of Sa'dî's *Bôstân*; and *دلکشا*, a *masnavî* in imitation and in the metre of Jelâl-ud-Dîn ar-Râmi's *masnavî*.

Besides the above Sayyid Hâshim is the author of the following:—*جلوس نامه خاقان* which is a metrical record of the victory gained by Fath 'Alî Shâh over Sâdiq Khân Shaqâqî.

بشارت نامه a prose relation of the march of Âqâ Muhammed Khân on Isfahân.

روح افزا a mystical poem (*masnavî*) on Love, in imitation of Mirzâ Nâsir Hakîm Bâshî's *masnavî*.

مخزن الاسرار the name of a work purporting to be a prophetic forecast of events from A.H. 1212 to A.H. 2640, the year of the future Deluge.

صور الطغرا is the title of a collection of 1,500 despatches and letters written for Fath 'Alî Shâh and the Princes.

The *قانون السلطنة* contains the author's ideas of statesmanship and king-craft.

کنز الاحکام consists of astrological forecasts and horoscopes.

The author states that his fourteenth production was a wonderful *masnavî* of fifteen hundred distichs, which unfortunately had been half-eaten up by mice, and he regrets his inability to reconstruct it. Besides the above the Rustem-ul-Hukemâ is the author of sundry other productions of scarcely any literary value. His autograph *Dîvân* has passed through my hands. Its colophon bore the date A.H. 1248. In the conclusion of that work was a notice of a *masnavî* the author proposed writing in seven thousand distichs, which he intended to call *بزم و رزم* and which was to be in four different metres.

A LIST OF WORKS PRINTED IN PERSIA IN THE ARMENIAN LANGUAGE.

All the following were issued from Presses which existed or exist at Julfa, the Armenian suburb of Isfahân. The dates vary from A.D. 1641 to 1887.

- 1641.—The Lives of Our Holy Fathers; printed in special type, on fine paper, in the time of the Archbishop Khachatour the First.
- 1642.—Prayer Book (same period).
- 1642.—Psalter; printed by Johannes Vartabed, disciple of Archbishop Khachatour the First, from a new press, with new characters.
- 1647.—Calendar; written by Simeon Vartabed, printed by Johannes Vartabed. A Bible was commenced, but remained incomplete.
- 1687.—The Armenian Dogma, and the introduction of schismatic ideas: printed in the time of the Archbishop Stephanos.
- 1687.—“The Book of Discussion;” an apology for the faith; by Alexander Vartabed: printed in the time of Archbishop Stephanos.
- 1688.—A *résumé* of arguments against those who believe in the dual nature of Christ; printed in the time of Stephanos.

The above is the only list I have been able to make of the earlier printed books. Since 1872 the following have been published:—

Alphabet; Spelling Book; An abridged Armenian History; A Catechism by Mesar; Elements of Armenian Grammar; History of the Holy Books; The Duties of a Christian; Description of Ceremonies; History of New Julfa, Vols. I. and II. Biography of the late Archbishop Thaddeus, with a poem on his death; Reader for children; Prayer Book; Biography of Mary Haronteun and her husband; Book of the Mass; Book of Assemblies; Copies of the first Bulls of Macar, the true Catholicos of Armenians; (now in the press) Evidences of Christianity.

Besides the above some Annual Calendars have been published since 1872; I believe to the number of 11 or 12.

I believe the above two lists are far from perfect, but so far they are all that I have been able to get.

SANSKRIT AND OLD-KANARESE INSCRIPTIONS.

By J. F. FLEET, B.O.C.S., M.R.A.S., C.I.E.

(Continued from Vol. XVI. p. 256.)

No. 172.—KALAS-BUDRUKH PLATES OF BHILLAMA III.—SAKA-SAMVAT 948.

THIS inscription, which was first brought to notice by me in this Journal, Vol. XVI. p. 43ff., and is now published in full for the first time, is from some copper-plates that came to my notice in 1886. I edit it from the original plates, which I obtained, for examination, though the kindness of Mr. G. Waddington, B.O.C.S. They were found in a plot of land belonging to Gaṅgādhara Trimbak Kuṭṭarṇī,—in whose possession, I presume, they now are,—at the village of Kalas-Budrūkh,¹ about three miles east by south of Akōlēn,² the chief town of the Akōlēn Tāluka or Sub-Division of the Ahmednagar District in the Bombay Presidency.

The plates, of which the first and last are inscribed on one side only, are three in number, each measuring about 11½" by 7½". The edges of them were fashioned somewhat thicker than the inscribed surfaces, with corresponding depressions inside them, so as to serve as rims to protect the writing; and the inscription is in a state of very good preservation throughout. The plates are thick and substantial; and the letters, though fairly deep, do not shew through on the reverse sides of them at all. The engraving is fairly good; but, as usual, the interiors of some of the letters shew marks of the working of the engraver's tool. The plates are numbered; the first, just before the opening symbol of the inscription; the second, on the second side of it, just before the beginning of line 31; and the third, half-way down, opposite line 55. In the first plate, the ring-hole was first made at the top; but it was then filled in again, and a fresh hole was made at the bottom, according to the usual arrangement.—The plates are held together by a roughly circular ring, about $\frac{5}{16}$ " thick, and and 2½" in diameter. It had not been cut when the grant came into my hands. The ends of the ring are secured in the thicker end of a pear-shaped mass of copper, about 2½"

high and with a circumference of about 5½" at the largest part, in the upper half of which there is, in relief, a small image, about 1½" high, apparently of Garuḍa, squatting full-front, with his hands joined in front of his chest, and with a bird's head and beak. The image is too much worn, to be reproduced with the lithograph of the plates.—The weight of the three plates is 333½ tolas, and of the ring and image, 41½ tolas; total, 375½ tolas.—The average size of the letters is about $\frac{5}{16}$ ". The characters are those of the South-Indian Nāgarī alphabet of the period. The decimal signs for 1, 2, 3, 4, 8, and 9, occur in the numbering of the plates, and in the date, in line 15.—The language is Sanskrit throughout. Except for the opening words *Om Om namaḥ Sarvajñāya*, the inscription is in verse as far as line 14. From there, to the end, the formal part of it is in prose; with the introduction of some of the usual benedictive and imprecatory verses in lines 22 to 27, 48 to 53, 55 to 59, and 60-61; and with a final verse in line 61-62, recording the name of the writer of the charter.—In respect of orthography, we have to notice—(1) the general use of the *anusvāra*, instead of the proper nasal, e.g. in *āmyās*, line 1; *chāmṭra*, line 2; *disānta*, line 2-3; *paṇḍha*, line 16; *maṇḍvā*, line 46; though the proper nasal occurs in *sāmanta*, line 10; *śaṇḍalanaśchāmṭra*, line 12; *āṣṭāṣṭānti*, line 21; *maṇḍvā*, line 36; and other places;—(2) the use of *v* for *b*, throughout, e.g. in *śavda*, line 16; *pravala*, line 19; and *crāhmr-ṇaiḥ*, line 39;—and (3) an occasional use of *s* for *ś*, e.g. in *saurya*, line 8; *sūścāta*, line 20; and *parāsara*, line 23.

The inscription opens with an invocation of the god Śiva under the name of Sarvajña (line 1), followed by a verse in praise of Brahma, Viṣṇu, and Śiva, under the names of Hiraṇyagarbha (l. 2), Achyuta, and Chandramaṇḍali. It then relates that, in the lineage of Yadu (l. 3), there was born a 'king' named Sēunachandra. His son was

¹ Indian Atlas, Sheet No. 38. Lat. 19° 32' N.; Long. 74° 9' E.

² The 'Akola' and 'Ankola' of maps, &c.

Dhādīyappa (l. 5). His son was **Bhillama I.** His son was **Rāja** (l. 6), or perhaps Śārāja. His son was **Vaddiga** (l. 7). And his son was **Bhillama II.** (l. 8); whose wife was **Lakshmi** (l. 9),² "who illumined the Yādava and Rāshtrakūṭa families." Their son was **Vēsū** (l. 10), "a very jewel of a *Sāmānta*." And his son was **Bhillama III.** (l. 12), whose capital was **Sindinagara** (l. 13).

The inscription then records (l. 48) that, in Śaka-Saṃvat 948, the Krōṭhana *saṃvatsara*, the *Mahā-sāmānta* **Bhillama III.**,—who had attained the *pūṣhanothāśāhī* (l. 16); who was born in the Vishṇuvamśa or lineage of Viṣṇu (l. 17); and who had the *bīṛuḍa* of Yādava-Nārāyaṇa,—bearing in mind the precepts (l. 18-27) of Parāśara (l. 28), Dakṣha, Kutsa, Āṅgīrasa, Gōtama, Manu, Yājñavalkya, and other great sages,—having bathed in the river **Dēvanadī** (l. 32), which adorned the city of **Sindinagara** (l. 29-30) just as the Mandākinī or heavenly Ganges adorns Amarāvati or the city of the immortals,—having offered a libation to the *pīṭṛis*, or manes of his deceased ancestors (l. 33); having presented an *araha*-offering of water, mixed with red water-lilies, to the Sun (l. 34); having done worship to the god Śaṃbhū; and having duly performed the rites of a *bhū*-sacrifice,—poured water (l. 39) into the hands of the *Mahā-pradhāna* Maṇamvanāyaka (l. 38), the great-grandson of Śrībhāta who came originally from the *blatta*-village of **Takkārikā** in the **Madhyadēśa** or Middle Country (l. 35) and belonged to the Madhyamādīna *śūkhā* and the Bhāradvaja *gotra*, and into the hands of twenty-five other Brahmins (l. 39) who resembled him in merit, but whose names are not given, and presented to them the village of **Kalaśa** (l. 45), which was bounded on the east by the village

of **Samgamikā** (l. 39), on the south, by the village of **Tamraprastara** (l. 40), on the west, by the village of **Thūha**, and on the north, by the river **Payōdharā** (l. 41). The terms and conditions of the grant are detailed in lines 41 to 45. Lines 45 to 61 contain an order that no obstacle shall be raised to the enjoyment of the grant by Maṇamva and the other Brāhmins; followed by the customary benedictive and imprecatory verses and precepts. And the concluding verse, in lines 61-62, records that the charter was written, at the command of Bhillama III., by Harichandra, the son of Rudrapaṇḍita.

Of the places mentioned in this inscription, **Sindinagara**, the capital of the family, is evidently identical with the **Sindinēra**³ mentioned in line 6 of the inscription of Śeṇachandra II., of Śaka-Saṃvat 991, *ante*, Vol. XII. p. 119ff. **Sindinēra** has been identified by Dr. Bhagwanlal Indraji⁴ with the modern **Sinnar**,⁵ the chief town of the Sinnar Talukā or Sub-Division of the Nāsik District. And this identification is fully borne out by the record in the present inscription that Sindinagara was adorned by the river **Dēvanadī**. **Dēv**, *i.e.* **Dēvanadī**, is the name of a small river or stream which unites with the *Siv*, *i.e.* *Sivanadī*, close below the town of **Sinnar**;⁶ the two together, under the name of **Dēvanadī**, flow on and join the Godāvarī about five miles south-east of Nandū-Madhmeśwar, passing on the way a large village named **Dēvapūr**. **Kalaśa**, the village granted, is the modern **Kalas-Budrūkh**,⁷ three miles east by south of Akōlēm, and about twenty-one miles south by east of Sinnar. **Samgamikā**, which bounded it on the east, is evidently the modern **Samgamnēr**,—through the form **Samgamaganagara**.—the chief town of the Samgamnēr Talukā in the

² In line 9 of the Bissani grant of Śaka-Saṃvat 991, published by Dr. Bhatia and Indani, *op. cit.*, Vol. XII. p. 119, the name is a variation in the Prākṛit form of *Lakṣmavati*, and she is said to be the daughter of Jhaṭṭha, and to belong to the Rāshtrakūṭa lineage.

³ It is perhaps also mentioned as *Sindināra* in lines 20 and 32 of the same inscription. The published version gives "Sindināra" in l. 20, and "Sindināra" in l. 32. "Sindināra" in the text, and "Sindināra" in the translation.—Other instances of the corruption of the Sanskrit *nagara* into the Prākṛit *nāra* are mentioned by Amalner, Jambher, Neri, Itapāner, and Thāner in the Khandesh District. For example, *Sindināra* into *Alhānagar* District, and *Sindināra* into *Sindināra* in the Poona District. A similar corruption of *nāra* into *nāra* is found in the name of *Alhāner* in the Nāsik

District. And "Nōnera" in the Nāsik District, about twenty-three miles east of Malegaon, seems to represent either *Nōnera* (*not a nāra*) or *Nōnera* (*not a nāra*).

⁴ *Ante*, Vol. XII. p. 124.

⁵ The "Sinnar" of the Indian Atlas, Sheet No. 38. Lat. 19° 59' N., Long. 74° 3' E.—With the further corruption here of *nāra* into *nāra*, we may compare the name of Jambher in the Poona District.—A note in the *Becher's Gazetteer*, Vol. XVI. Nāsik, p. 618, tells us that "Sinnar is almost invariably called Sindar by the population."

⁶ *Becher's Gazetteer*, Vol. XVI. Nāsik, p. 618; see also p. 618.

⁷ *Becher's Gazetteer*, Vol. XVI. Nāsik, p. 618; see also p. 618. The larger, senior, older, or original Kalas, as opposed to Kalas-Khūn just on the north of it on the other side of the river Prayāg.

Almadnagar District. The village of **Tāmraprastara**, which bounded it on the south, has now disappeared. **Thūha**, which bounded it on the west, is the modern **Thūgaum-Budrūkh**, two miles to the west by north. **Payōdharā**, the river which bounded it on the north, must be the old original name of the modern **Pravarā**, which flows by just to the north of Kalas-Budrūkh, and joins the Mahāluṅgi or Māluṅgi at Saṁgamner.

The full details of the date, which, in line 14f., is recorded both in words and in decimal figures, are, by literal translation,—“in nine centuries, increased by forty-eight, of the years that have gone by from the time of the Śaka king; or, in figures 948; on the occurrence of an eclipse of the sun in (the month) Kārttika (October-November) of the **Krōdhana saṁvatsara**.” The *saṁvatsara* in question is one of the years of the Sixty-Year Cycle of Jupiter. And, by the Southern System of this cycle, the **Krōdhana saṁvatsara**, current, was identical with Śaka-Saṁvat 947 expired, and 948 current. With the basis of Śaka-Saṁvat 947 expired, and according to the *Amānta* southern arrangement of the lunar fortnights, I find, from Prof. K. L. Chhatre's Tables, that the given *tithi*, viz. the new-moon *tithi* of the month Kārttika of Śaka-Saṁvat 948 current, ended on Tuesday, the 23rd November, A.D. 1025, when⁹ there was an eclipse of the sun; and, as the *tithi* ended, approximately, at 4 *ghaṭis*, 40 *palas*, or 1 hour, 52 minutes, after mean sunrise at Bombay, there would be nothing in the time to prevent the eclipse being visible at Bombay and to the east of it. By the Northern System of the cycle, the **Krōdhana saṁvatsara** was current, according to the Tables, at the commencement of Śaka-Saṁvat 946 current (A.D. 1023-24); and, from some Tables and rules drawn up by Mr. Sh. B. Dikshit, I find that it commenced on Thursday, the 22nd November, A.D. 1022, and was followed by the **Kṣhaya saṁvatsara** on Monday, the 18th November, A.D. 1023. But there was no eclipse of the sun, on the given *tithi*, in this period; nor after it, before the 23rd November, A.D. 1025. It is evident, therefore, that in this record we are concerned with the **Southern System** of

the **Sixty-Year Cycle**; and, since the English equivalent of the given *tithi* of the *Pūrṇimānta* northern Kārttika would be about a month earlier, when there was no solar eclipse, with the **Amānta southern arrangement of the lunar fortnights**. Also, unless we choose to assume a mistake in the number of the given year, in deliberately writing the year 948 instead of 947, in words as well as in figures,—which assumption is quite unnecessary, since, even to the present day, in some parts of Southern India the reckoning of the Śaka era is the system of current years.¹⁰—this record furnishes a **clear instance of the quotation of a current Śaka year**. It is true that an eclipse of the sun occurred again on Saturday, the 12th November, A. D. 1026, which answers, again in accordance with the *Amānta* southern reckoning, to the same *tithi* of Śaka-Saṁvat 949 current, or 948 expired. But the chief guide as to the period in which we have to find the eclipse, is given by the name of the *saṁvatsara*; and, as I have said, the **Krōdhana saṁvatsara**, by the Southern System,¹¹ was Śaka-Saṁvat 947 expired, and 948 current, equivalent to A.D. 1025-26 current. If we were to except the eclipse of the 12th November, A.D. 1026, which would be the correct one for Śaka-Saṁvat 948 as an expired year, we should have, either to understand that the **Krōdhana saṁvatsara** also is intended to be taken as expired, which would be, to say the least, an absurd way of quoting it; or else to correct the name of the *saṁvatsara* from **Krōdhana** into **Kṣhaya**, which is in itself hardly justifiable, and is in fact wholly unnecessary, because, as we have seen, a suitable eclipse of the sun did occur, on the given *tithi*, in the **Krōdhana saṁvatsara**. It is also true that the word *sa* occurs in the compound **Śaka-*apī*-lāl-ā-*śa*-saṁvatsara-satēśa**; and that it is not always easy to decide whether the use of it in this and similar compounds does, or does not, qualify the exact number of the year. In some cases, indeed, unless we assume the omission of a separate word meaning “having expired,” it would seem that the use of it in the compound really is intended to mark the exact given year as an expired year. But the word

⁹ See *Indian Eras*, p. 214.

¹⁰ See a “Note on the Epoch of the Śaka Era,” which will appear shortly in this Journal.

¹¹ See *Indian Eras*, p. 171, and Patell's *Chronology*, p. 138.

gatēshu sometimes occurs, as a separate word, in addition to *a'ti* in the compound; e.g. in the Kauṭhēm grant of Vikramāditya V., where we have (*ante*, Vol. XVI. p. 24, line 61f.)—Śaka-nṛipa-kāl-ātita-samvatsara-śatēshu navasu trīṃśad-adhikēshu gatēshu 930 pravartamāna-Saumya-samvatsarē, &c. The Saumya *samvatsara* of that record really was, by the Southern

System, Śaka-Samvat 930 expired, and 931 current. In the present case, the separate word *gatēshu*, or any equivalent of it, does not occur. And there is nothing to prevent our understanding that *atītu*, in the compound, qualifies only in a general way the years of the era; and does not give a definite meaning of expired years to the exact year that is indicated,

TEXT.¹²

First Plate.

- 1 Ōm¹³ Ōm Namaḥ Sarvvajñāya ॥ Sanātana¹⁴-āṅgās=tridaś-ānat-ānhrayō Hiranya-garbh-Āchyuta-
- 2 Chandra-mō(man)layaḥ ॥(1) utpatti-rakshā-pralay-aika-hētavō niḥśēsha-viśvasya-śivaṃ dīśaṃ-
- 3 tu vah ॥ Śrīmān¹⁵=asti samasta-viśva-mahitaḥ śrēyān=Yadōr=anvayas=tasmin=Sēuṇa-
- 4 chandra ity=anupamō jātāḥ pratāpī nṛipaḥ | tasmāt=sūnur=anūna-kīrttir=ajani śrī-
- 5 Dhāṇiyapp-āhvayō vidhvast-āhita-samhatir=nnarapatir=jjātas=tatō Bhillamaḥ ॥(1) Tasmā-
- 6 d¹⁶=abhūd=bhūri-guṇ-ānavadyaḥ śrī-Rāja-nāmā naradēva-vaṃdyāḥ | jātas=tataḥ sūnur=arāti-tū-
- 7 la-dāvānalō Vaddiga-bhūmipālaḥ ॥ Tasmād=¹⁷dugdha-mahārṇnavād=iva śaśī viśvaṃ sa-
- 8 mudbhāsayan=simā sau(śau)rya-rasasya Bhillama-nṛipaḥ sa mṛgrāma-Rāmō=bhavat ॥(1) tasy=āsīj=ja-
- 9 gad-archehaniya-charitā Lakshmir=mmanah-prēyasi | yā śrī-Yādava-Rāshṭrakūṭa-kulayōr=jjā-
- 10 tā samudyōtinī ॥ Vēstū¹⁸-nām=ānupama-mahimā tasya sāmanta-ratnaṃ dharmmī dhīmān=sama-
- 11 jani sutō Bhillamasy=ātha tasyām | tasy=āpy=āsīd=asama-sukṛitō vikramī nyak-kṛit-āri-
- 12 ḥ putraḥ pātraṃ viśada-yaśasō nītimān=Bhillam-ākhyāḥ ॥ Ānandana¹⁹=chandra iva prajānām
- 13 yaś=cha pratāpī savit=i(ē)va rējē ॥(1) tasya prasiddhā bhuvī rājadhānī vibhāt Si[m*]dinagar-āsiddhanō²⁰ ॥
- 14 ॥²¹ ॥ Atha | Śaka-nṛipa-kāl-ātita-samvatsara-śatēshu navasv=ashṭachatvāri-[m*]śad-adhik[ē*]shv=aṅka-
- 15 tō=pi ॥ 948 ॥ Krōdhana - samvatsara²² - Kārttika - samjāt - ādityagrahaṇē

Second Plate; First Side.

- 16 Samadhiratupamīchamahāśayda(bda)mahāsāmamt-aikaśaṅkha dhvanivavirita²³bhuvanāntai rāla-
- 17 ŚrīViṣṇuvarṇasprasūta - YādavaNārāyaṇ - ādi - rājāvalī - virājita - śrī - Bhillama - rā-
- 1- jaḥ ॥ Asārātām saṃsārasya | asthiratām yauvanasya | kṣaṇikatām vibhavasya | vishu-visha-
- 19 matām vishaya-sukhasya | prava(ba)la-pavana-vaśa-chaḥlita-taru-śikhara-gata-pariṇata-pha-

¹² From the original plates.

¹³ This *ō* is represented by a symbol; the repetition of it is in ordinary writing.

¹⁴ Metre. *Śloka* (Anu-ubhu).

¹⁵ Metre. *Śāradavikrīṭita*. ¹⁶ Metre. *Indravajrā*.

¹⁷ Metre. *Śāradavikrīṭita*.

¹⁸ Metre. *Śāradavikrīṭita*.

¹⁹ Metre. *Upaṇi* of *Indravajrā* and *Upēndravajrā*.

²⁰ Read *the other*.

²¹ Between this mark of punctuation and the following,

there stands a circle divided into four parts by two lines crossing each other at right angles in the centre.—The same symbol, but with a *mālī* above it, occurs in line 62, at the end of the whole inscription; and a somewhat similar one in line 61.—A symbol of the same kind, in a Gādhār inscription, has been reproduced, *ante*, Vol. XV. p. 202.

²² The *ra* was first engraved between the *tsa* and the *ra*-hole, and then, not being satisfactory, was repeated.

²³ Read *balhita*.

i

२ ३ ४ ५ ६ ७ ८ ९ १० ११ १२ १३ १४
 ३ ४ ५ ६ ७ ८ ९ १० ११ १२ १३ १४
 १५ १६ १७ १८ १९ २० २१ २२ २३ २४ २५ २६ २७ २८ २९ ३०
 ३१ ३२ ३३ ३४ ३५ ३६ ३७ ३८ ३९ ४० ४१ ४२ ४३ ४४ ४५ ४६ ४७ ४८ ४९ ५०
 ५१ ५२ ५३ ५४ ५५ ५६ ५७ ५८ ५९ ६० ६१ ६२ ६३ ६४ ६५ ६६ ६७ ६८ ६९ ७०
 ७१ ७२ ७३ ७४ ७५ ७६ ७७ ७८ ७९ ८० ८१ ८२ ८३ ८४ ८५ ८६ ८७ ८८ ८९ ९०
 ९१ ९२ ९३ ९४ ९५ ९६ ९७ ९८ ९९ १००

ii a

१६ १७ १८ १९ २० २१ २२ २३ २४ २५ २६ २७ २८ २९ ३०
 ३१ ३२ ३३ ३४ ३५ ३६ ३७ ३८ ३९ ४० ४१ ४२ ४३ ४४ ४५ ४६ ४७ ४८ ४९ ५०
 ५१ ५२ ५३ ५४ ५५ ५६ ५७ ५८ ५९ ६० ६१ ६२ ६३ ६४ ६५ ६६ ६७ ६८ ६९ ७०
 ७१ ७२ ७३ ७४ ७५ ७६ ७७ ७८ ७९ ८० ८१ ८२ ८३ ८४ ८५ ८६ ८७ ८८ ८९ ९०
 ९१ ९२ ९३ ९४ ९५ ९६ ९७ ९८ ९९ १००

32 जीमदं गंधवा सिताजीनरे इष्टशरक इवाज्ञाना वि त विकसरा जीव रेणु रा।
 कृतयुगा विविस्नानो विदित पिह तर्क तोरक कने ल मित्रेण वा विणाद ताप्य
 34 मादिताय द ब्राहि प्र ग संतु पु विदित दो म कार्य सु ठ ति रः यान य न य प
 विरु तो गृहीत गुरु ज नानु रू णी मशर सातः गा वि ट ता वि कार ह य म वि निर्म
 36 त मा गृहीत सा त्व सा र द्वा ज ग्रा व श्री रु हा ति य न वि प्र व र पु न प्र पी प द्वा ना रु
 न पु श्री श्री व र्त्तना य क सु ना य म्वा था ध न दान प व र न य हा दि य र म्वा र्त्तना
 38 छान रे ना य म ता प व न य द वि ना डि ता थ म ण म्वा र्त्तन ना य को य क णे य
 व विं र ति रिः सु ब्रा ह्म णेः सर प म र क्वा द सा र क्वा प्र व र्त्तना ग र्त्तना मि ता
 40 ग्रामे य किं ए रा ग रा त तां व य म र था म य म्वा र्त्तना ग र्त्तना मि ता ग र्त्तना
 घयो व्वा न दी कं र उ मा यो य ल किं त सा र म्वा र्त्तना ग र्त्तना मि ता ग र्त्तना
 42 ला कुलं स र्त्तना का ष्ट स प ह ति का नु क वि ष य म्वा र्त्तना ग र्त्तना मि ता ग र्त्तना
 दी यि वा ज ल सु ल ग्ना क र म्वा र्त्तना ग र्त्तना मि ता ग र्त्तना
 44 न म स म क र वा ता त रं पु व पि वा म्वा र्त्तना ग र्त्तना मि ता ग र्त्तना
 या य द व स य व र्त्तना ग र्त्तना मि ता ग र्त्तना

46 म लं वा दि ता र्त्तना ग र्त्तना मि ता ग र्त्तना
 क र्त्तना ग र्त्तना मि ता ग र्त्तना
 48 न क र्त्तना ग र्त्तना मि ता ग र्त्तना
 दी य स र्त्तना ग र्त्तना मि ता ग र्त्तना
 50 क र्त्तना ग र्त्तना मि ता ग र्त्तना
 फ लं ग र्त्तना ग र्त्तना मि ता ग र्त्तना
 52 नं व रं ग र्त्तना ग र्त्तना मि ता ग र्त्तना
 उ र्त्तना ग र्त्तना मि ता ग र्त्तना
 54 र्त्तना ग र्त्तना मि ता ग र्त्तना
 सु द ता व र र्त्तना ग र्त्तना मि ता ग र्त्तना
 56 र्त्तना ग र्त्तना मि ता ग र्त्तना
 ता रि णा म र्त्तना ग र्त्तना मि ता ग र्त्तना
 58 न य र्त्तना ग र्त्तना मि ता ग र्त्तना
 र्त्तना ग र्त्तना मि ता ग र्त्तना
 60 र्त्तना ग र्त्तना मि ता ग र्त्तना
 62 म न मि ति न र्त्तना ग र्त्तना मि ता ग र्त्तना

- 20 la-van=niśchita-patanatām jīvitasya ch=ākalayya kēvalam dharmma ēva sá(sā)śvata-
śarmmañē
21 sañpadyata iti niyatam=avadhārya cha | tathā Kṛita-Trētā-Dvāparēbhyaḥ Kalau
dānam=ēva pra-
22 sañsanti munayaḥ || Na²⁴ tathā sa-phalā vidyā na tathā saphalam dhanam |
yathā tu munayaḥ prā-
23 hur=ddānam=ēkam Kalau yugē || Agnēr²⁵=apatyam prathamam suvarṇnam
bhūr=Vvaishṇavi sūrya-sutās=cha gāvaḥ
24 lōka-trayaṁ tēna bhavēt=pradattam yaḥ kāmichanam gam cha mahim cha.
dadyāt || Āsphōtayanti²⁶ pita-
25 rō valgañti cha pitāmahaḥ | bhūmi-dō=smat-kulē jātaḥ sa naḥ sañtārayishyati ||
Bhūmi-dā-
26 nam su-pātrēshu su-tīrthēshu su-parvvasu | agādh-āpāra-saṁsāra-sāgar-ōttaraṇam
bhavēta(t) ||
27 Dhavalāny=ātapatrāṇi dāntinaś=cha mad-ōddhatāḥ | bhūmi-dānasya pushpāni
phalam svarggē Purandaraḥ²⁷ ||
28 Ity-ādīni Parāsa(śa)ra-Dakṣha-Kuts-Āng irasa-Gōtama-Manu-Yājñavalkya-prabhṛiti-
mahāmuni-vacha-
29 nāni samyag-avagamyā mātāpitrōr=ātmanaś=cha sakala-nija-vamśasya cha śrēyaśē śrī-Si-²⁸
30 ndinagar - Āmarāvati - vibhūshāyām = Airāvaṇ - ānukāri - vāraṇa - kaṭasthala - galita-

Second Plate; Second Side.

- 31 mada-gaṁdha-vāsītāyām narēndra-vṛindāraka-dēv-ārchchan-ō chita-vikacha-rājiva-rēṇu-rā-
32 jī-rājita-puṇya-puñjāyita-jalāyām prathita-sutīrthāyām Mandākinyām=iva **Dēvanadyām**
33 kṛita-yathāvidhē(dli)-snānō vihita-pitri-tarppaṇō rakta-kamala-misrēṇa vāriṇā datv=ārcha-
34 m=ādityāya bhakty=ābhipājya Śambhum pravahita-hōma-kāryaḥ su-kṛitibhan-
pradhāna-purushaiḥ pa-
35 rivritō grīlūta-gurujan-ānujñāḥ śrī-Madhyadēs-āntahpāti-Takkārikābhatagrāma-
vinirga-
36 ta-Mādhyandinaśākha-Bhāradvājagōtra-Śrībhāṭṭābhidhana-vipravara-pranaptrē sri-
Padmanābha-
37 naptrē śrī-Srīvatsanāyaka-sutāya svādhyāya-snāna-dāna-pañchabhūtagajē-ādī-
grihastha-dharm-ānu-
38 shṭhāna-ratāya mahāpradhāna-pada-virājītāya śrī-Maṇamv-ābhidhāna-nāyakāya tad-
guṇaiḥ pa[m*]-
39 cha-vimśatibhiḥ su-vrā(brā)hmaṇaiḥ saha parama-bhaktyā hast-ōdakam kṛitā
pūrvabhāga-gata-Saṁgamikā-
40 grāmam dakṣiṇabhāga-gata-Tāmvrā²⁹prastara-grāmam paśchimabhāga-gata-Thūha-
grāmam=uttarabhāga-stha-
41 Payōdharā-nadikam chatur-āghāṭ-ōpalakshitam s-ōdraṁgam s-[ō*]parikaram sa-simā-
paryāntam sa-vṛiksha-mā-
42 lā-kulam sa-triṇa-kāshtham sa-prabhṛitik-ānuka-vishay-āśrayam sarid-vāpi-kūpa-kūpikā-
tadāga-
43 dīrghikā-jalasthala-khany-ākara-mṛid-vanaushadhi-prāsāda-gōpur-ōpētām sarvv-āyasthana-
sahitam
44 namasyam=a-kara-vāt-ōttaram putra-pautr-ādy-anvay-ōpabhōgyam=a-chāta-bhata-pravēśam
pūrvvadatta-dvija-
45 dāya-dēvadāya-varjjam vasad-bhōjya-vṛittim **Kalasa-nāmānam** grāmam pradadau ||
Tad=ēśham

²⁷ Metre, Ślōka (Anushtubh)

²⁸ Metre, Indravajrā.

²⁹ Metre, Ślōka (Anushtubh): and in the next two verses.

²⁷ Read *Purandara*.

²⁸ These two syllables, *śrīsa*, probably owe their coarse and blurred shape to some latent fault in the copper.

²⁹ Read *Tāmra*.

Third Plate.

- 45 Maṇamv-ādi-vrā(brā)hmaṇānām s-ānvaya-va(ba)mdhūnām svaya[m*]-bhujānānām bhōja-
yatām vā kṛishatām
17 kārshayatām vā yath-ēṣṭām pratidīśatām⁸⁰ pratidēśayatām vā kēn=api paripamthanā
48 na karttavyā || Yata uktām mahā-munibhiḥ ||(1) Yun⁸¹=īha dattāni purā narēn-
drair=ddānāni dharmm-ā-
49 rtha-yaśas-karāṇi | nirmālya-tulyāni bhavaṃti tāni kō nāma datvā punar=ādadita ||
Va(ba)-
50 hubhi[r*]⁸²=vvasudhā bhuktā ga(rā)jabhiḥ Sagar-ādibhiḥ | yasya yasya yadā
bhūmis=tasya tasya tadā
51 phalaṃ || Sadyō-dānām nirāyāsam s-āyāsam tasya pālanām | ēvaṃ tu munayaḥ
prāhur=ddānāt=tat-pāla-
52 nam varam || Sarvvaṇ⁸³=ētān=bhāvinaḥ pāṛthivēmdrān=bhūyō-bhūyō yāchatē Rāma-
dēvaḥ | sāmānyō=yam dharmma-sē-
53 tur=nṛipāṇām kalē-kalē pālanīyō bhavadbhiḥ || Ity=arthitō=pi Kali-kāla-vasā(sā)=
lōbh-ābhi-
54 bhūtō yaḥ pūrvva-dān-āpahāram karōti sa pañcha-mahāpātakair=upapātakais=cha
lipyatē ||
55 Sva⁸⁴-dattām para-dattām vā yō harēta vasumdharam | sbasṭi-varsha-sahasrāṇi
vishṭhāyām jāyatē kṛimih ||
56 Vindhy-ātavishv=atōyāsu śushka-kōṭara-vāsinah | mah-āhayō hi jāyamtē bhūmi-dān-
apa-
57 hāriṇah || Satyam yajña-hutam ch=aiva yaḥ kaśchid=dharmma-samchayaḥ | arddh-
āṃgulēna sīmāyām haraṇē-
58 na prapaśyati | (1) Aśva-m[ē*]dha-sahasrē(srē)ṇa vājapēya-śatēna [cha*] | gavām
kōti-pradānēna bhūmi-ha-
59 ttā na su(su)dhyati || Iti muni-vachanāni matvā bhāvibhir=nṛipatibhir=ddharma⁸⁵-
lōbha eva karttavyah || Punar=api śri-
60 Bhillama-rājah prarthayati || Chha⁸⁶ || Mad⁸⁷-vaṃśa-jā vā para-vaṃśa-jā vā yē
puṇyavāntō mama dharmmam=ēnam | pra-
61 pdayishyānti nṛipāḥ samagram kṛit-āṃjalih s-ādaram=asmi tēsbām ||⁸⁸ ||
Vachanā⁸⁹=Bhillama-nṛipatēḥ sa(sā)-
62 sarame-iti Rudrapaṇḍita-sutēna | Harichandra-nāma-vidushā vrā(brā)hmaṇa-hita-
hētavē rachitam ||⁹⁰ ||

THE VICISSITUDES OF THE BUDDHIST LITERATURE OF CEYLON.

BY THE REV T. FOULKES.

(Continued from p. 101).

Another noteworthy event of this period is the production of a medical work in the Sanskrit language by king Buddhadāsa, who reigned

in the middle of the 4th century A.D.,⁹¹ which was still extant when the *Mahāvaṃsa* was written. The special significance of this book

This *concealer* is imperfect, and looks very much like an 's' attached to the *v* of *vianth*, as in the line above. Metre, Śloka (Anushtubh), and in the next verse.

Metre, Śloka (Anushtubh), and in the next verse.

Metre, Śloka.

Metre, Śloka (Anushtubh), and in the next three verses.

This *ma* was at first omitted, and was then inserted above the line, below the *ga* of *gavā*, in the line above, with a cross-mark over the place to which it belongs.

On the same sign in these characters, read its back letters. It may stand for *chkan*, 'cutting

dividing, a part, a fragment; or for *than*, 'preserving, preservation; auspiciousness: a prayer for the welfare of another.'

⁸⁷ Metre, Upajāti of Indravajrā and Upendravajrā.

⁸⁸ Between this mark of punctuation and the following there stands a circle divided in half by a line passing vertically through the centre.

⁸⁹ Metre, Āryā.

⁹⁰ See note 21 above.

⁹¹ A.D. 339 to 368. Turnour, 245; Introd., p. lxx. The record of this work is confined to the Turnour *Mahāvaṃsa*.

is, that its royal author, living at a time when, with this single exception, the existence of Sanskrit books in Ceylon is not mentioned by the native authorities, should have chosen this language for a book whose practical subject shows that he wrote it for more or less public use. It affords reason for the conclusion that, whether known or unknown to the chroniclers, the Sanskrit language was cultivated in Ceylon at this time, and that books written in that language were sufficiently well-known there in the 4th century A.D.

Both recensions of the *Mahāvamsa* attribute to this king's reign translations of some unmentioned portions of the sacred books of Buddhism into the vernacular Sinhalese language.⁴⁷ The Upham recension adds that these translations were made from Pāli texts; but the Turnour recension and the *Rājaraṭnākara*⁴⁸ do not uphold this latter statement; and, if Buddhaghōsha's Pāli texts were the earliest appearance of books in that language in Ceylon, that statement cannot be accepted. The *Rājāvali* does not mention these translations; but it states⁴⁹ that this king provided books and preachers for the villages in his dominions.

We have now reached a very interesting epoch in the history of this literature, namely, the visits of the Chinese Buddhist pilgrim **Fa-Hian** and the famous Pāli scholar **Buddhaghōsha**. Fa-Hian went to Ceylon in A.D. 411 by the sea-route, from the mouth of the Ganges, and spent two years in the island.⁵⁰ He had come to India from China by the long land-route to the north of the Hīmalayas, in order to search for an authentic copy of the *Vinaya*, one of the three great divisions of the Buddhist canonical scriptures;⁵¹ and although he had visited many monasteries in his route, he had been unsuccessful in his search until, after five years' wanderings, he reached Pātaliputra, the modern Patna, the home of the great Aśoka and his missionary son Mahinda, where he found in one of its monasteries a venerable copy of that

work in the Sanskrit language, which had originally belonged to Buddha's own famous Jētavana monastery at Śrāvastī.⁵² He remained three years at this place studying the Sanskrit language, reading Sanskrit books, and copying this great work and other Buddhist books in the same language which he found there. He subsequently spent two years at Tāmralipti, copying similar books and sketching Buddhist images, and he then embarked for Ceylon.⁵³

It is important to remark here that the very ancient copy of the *Vinaya*, which Fa-Hian found in the capital of the Magadha country—the supposed home of the Pāli language, “the speech of Magadha,” and the alleged vernacular of Buddha's own discourses—was written in the **Sanskrit language**, as were also the other Buddhist scriptures which he found there. It is equally clear that such imperfect portions of the *Vinaya* as had reached China before Fa-Hian started on this journey were also written in that language,⁵⁴ and the books which he subsequently copied in Tāmralipti and Ceylon were in the same language; all of which he “edited” on his return home, with the assistance of the Chinese Sanskrit scholars of Nankin.⁵⁵ All this may not be absolutely decisive of the question of the original language of the Buddhist canonical scriptures: but it has considerable importance in the investigation of that question, especially as no equally trustworthy evidence has yet been discovered of the existence of any portion of the Buddhist canon in the Pāli language as early as this period.⁵⁶

It is also worth while pausing to remark that Fa-Hian found the teachers of the Buddhist monasteries of Mongolia, Afghanistan, the Panjāb, and North-Western India, as far down as Pātaliputra, teaching their pupils the standard works of their religion by word of mouth;⁵⁷ although it was from these same countries that the books which they so taught

⁴⁷ Upham, I. 238; Turnour, 217.

⁴⁸ Upham II. 139.

⁴⁹ *Ib.* II. 241.

⁵⁰ *Fa-Hian's Travels*, Chap. XXXII. By means of these general references to the chapters of Fa-Hian's book the reader will be able to consult any one of the versions which may be most convenient to himself.

⁵¹ *Fa-Hian*, chap. XXXVI.

⁵² *Fa-Hian*, chap. XXXVI.

⁵³ *Fa-Hian*, chap. XXXVII.

⁵⁴ For illustrations of Fa-Hian's statements on this subject, see the Rev. Samuel Beal's Introduction to his translations of the works of this Chinese traveller and

of Hsien Tsiang; and also Dr. Edkins' *Chinese Buddhism*, p. 491 ff.

⁵⁵ *Fa-Hian*, chap. XL.

⁵⁶ The supposition that Pāli books existed in China, which originated in an error of Gutzlaff (*Sketch of Chinese History*, I. 250, and another work quoted in Fortune's *Wanderings*, p. 186), may now be regarded as exploded. [See Medhurst's *China, its State and Prospects*, p. 206, and Edkins *op. cit.* *sup.* p. 402.] It seems also high time to discard the idea that the Pāli of the Southern Buddhists was at any time the spoken language of Magadha.

⁵⁷ *Fa-Hian*, chap. XXXVI.

had been brought to China during the previous four centuries, and copies of them were still in existence in Pātaliputra, Tāmralipti and Ceylon at this very time. This circumstance affords to my mind a sufficient solution of the Sinhalese paradox of the exclusively oral transmission of these books down to the 1st century B. C. The kind of oral teaching which Fa-Hian had himself passed through in his youth in China,⁵⁸ and which he now found in use amongst the northern Buddhists, while the books were there also, may be accepted as the practice which we still find in all indigenous Hindu schools, and which has existed in them at all times; but at no time did this kind of teaching necessarily presuppose the contemporaneous or previous non-existence of the books which were so taught.

Fa-Hian made some important additions to his previous literary acquisitions during the two years which he spent in Ceylon,⁵⁹ and he expressly states that the books which he found there were written in the Sanskrit language, and that these books were large portions of the *Tripitaka*. Moreover, though the argument from silence is not to be pressed beyond its value, he does not appear to have seen any books there in the Pāli or any other language but Sanskrit.

The visit of **Buddhaghōsha** followed soon after that of Fa-Hian, according to the date which is commonly assigned to him. Various dates, however, have been given to him, ranging from B. C. 397 to A. D. 607. All the details also in the descriptions of his visit differ largely in the different authorities respecting the place from whence he came and the country to which he returned, what his connections were during his stay, and what his object and motive for going to Ceylon, whether he enriched the existing literature of the island by additions which he brought with him, or borrowed from its books to enrich the literature of his own country, or wrote original works of his own. The account which has been commonly received of him is that which is given of him in Turnour's recension of the *Mahāvamsa*. This account, however, not only stands alone and unsupported, and differs

materially from the statements of the other authorities, but its elaborate details strongly suggest that it is the interpolated work of some later commentator rather than the original words of the continuator of the *Mahāvamsa*. To enter fully into these conflicting statements would occupy too much space here, but that which arises out of the spirit of the whole of the traditions regarding him is the predominating circumstance of his intimate connection with the traditions of the Pāli language.

He appears also to have been the first to present the Buddhist canonical scriptures in the Pāli dress in which they have since his time been preserved by the Southern Buddhist nations. The Turnour *Mahāvamsa* makes his work to be a translation of these scriptures into Pāli, from a version made into Sinhalese by the royal monk Mahinda in the 3rd century B. C.; but this statement⁶⁰ does great violence to the whole current of the other more consistent traditions. We shall not be in error probably in supposing the books which he found in Ceylon to be the very same, or similar, Sanskrit books as Fa-Hian had seen there so recently before, and that Buddhaghōsha's special work, apart from his original compositions, consisted in transliterating the *Tripitaka* and its commentaries out of the Sanskrit language into the more amenable form of the Pāli Prākṛit, and so adapting them for popular use. The practical service which he would thus have rendered to all future generations of his co-religionists would be amply sufficient to secure for him the high position which he has ever since continued to occupy in their traditions as one of their foremost literary benefactors.

Period III.

From the 5th to the 11th Century A. D.—Very little remains on record on the constructive side of the literature during this period. Soon after Buddhaghōsha's visit a succession of twelve irruptions of the Tamils of the opposite continent of India commences, which form the special subject of the *Rājavalī*, resulting, notwithstanding some alternating revivals, in the overthrow of the ancient monuments and monasteries of the island, and the

⁵⁸ He was able to recite the *Saṃgha Sūtra* from memory on the spot where Buddha had died, and it (F-Hian, chap. XXIX) before he learnt Sanskrit

systematically at Pātaliputra.

⁵⁹ F-Hian, chap. XL

⁶⁰ See *ibid.*, p. 163

repeated suppression of Buddhism, and culminating in the dispersion of its monks and the complete destruction of its ancient literature.

After one of these catastrophes king **Dhātusēna**, A.D. 459 to 477, inaugurated a restoration of the old religion by convening a council, after the example of **Aśōka**, to settle anew the text of the canonical books.⁶¹ He also caused the *Dīpavaṃsa* to be publicly read on the site of Mahinda's funeral pyre,⁶² in order to stimulate the religious zeal of his people.

Towards the middle of the sixth century, the books of the heretical **Vaitulyas** were publicly burnt for the third time.⁶³ And then a long barren period succeeds down to the middle of the 9th century, which is only broken by the appearance of the **Laṅkāvistariyaye**, a Sinhalese work which Sir Emerson Tennent attributes to the 7th century,⁶⁴ and by the despatch of a Brāhmaṇ priest, in A.D. 746, by the king of Ceylon, on an embassy to the emperor of China, bearing, together with other royal presents, a copy of the great **Prajñā-sūtra**.⁶⁵

The poet-king **Mutwāle-Sēna**, A.D. 838 to 858, explained the *Sūtra-piṭaka* in public,⁶⁶ according to the legend of the Upham *Mahāvamsa*. The *Rājaraṭnākari*, however, from the traditions of a different school, states that this king, under the influence of a heterodox monk from India, was turned away from the orthodox creed, and "rejected and laid aside the precepts taught by the books and sermons of Buddha, and adopted the maxims of other systems of religion."⁶⁷

His successor, **Kāśyapa IV.** or **Madisēn-Sēna**, A.D. 858 to 891, did his best to counteract this evil. He "encouraged the priests of Buddha to re-establish their religion and to oppose the false religion throughout all his dominions, caused the coasts of the island to be diligently watched to prevent the approach of Buddha's enemies, and reigned as a good king; but, notwithstanding all this precaution, it was only like enclosing a field of corn after driving oxen into the same to eat it up, for a

number of unbelievers were already in the island."⁶⁸

The end was not far off now. The *Mahāvamsa* states that at the close of this period the "religion" "was overthrown by the **Malabars** during the term of eighty-six years."⁶⁹ The *Rājaraṭnākari*⁷⁰ similarly states that during the nineteen reigns which preceded that of **Mahalu-Vijayabāhu**, in A.D. 1071, "the Malabars kept up a continual war with the Ceylonese, and had filled by this time every city and village in the whole island," and that these Malabars, "as far as they did prevail, abolished the laws and religion of Buddha."⁷¹ So also the *Rājāvali*⁷² states that they "vanquished Ceylon and subverted the religion of Buddha."

Soon afterwards, in the reign of **Udaya II.**, A.D. 926 to 937, the open wickedness of this immoral sect attracted the attention of the king, who, after an examination of their books, "shut them all together in a house, with their books, and, setting fire to the same, burnt the whole to ashes."⁷³

In the latter half of the 10th century the rich and learned king **Kāśyapa VI.**, A.D. 954 to 964, caused the *Abhidharma-piṭaka* to be engraved on golden plates and adorned it with precious stones.⁷⁴

Period IV.

From the 11th to the 13th century A.D. : king **Mahalu-Vijayabāhu**, A.D. 1071 to 1126, vanquished these Malabars, and "united the three kingdoms of Ceylon under the same banner;"⁷⁵ and he then set about the restoration of Buddhism. At this time "there were not five monks left" in Ceylon, or, as the *Rājāvali* more emphatically says, "the Malabars had completely extirpated the priests of Buddha, so that a yellow robe was no more to be found."⁷⁶

He therefore sent large presents to the king of **Aramana**,⁷⁷ on the coast of Coromandel, and obtained from him a mission of twenty or twenty-nine monks, to confer ordina-

⁶¹ Upham, I. 241 : II. 75 : Turnour, 256.

⁶² Turnour, 257.

⁶³ Upham, I. 242 : II. 61, 65, 77.

⁶⁴ Tennent's *Ceylon*, I. 494.

⁶⁵ *ibid.* I. 621, note 2.

⁶⁶ *ibid.* p. 249.

⁶⁷ Upham, II. 251.

⁶⁸ Upham, II. 81, 82.

⁶⁹ Upham, I. 253.

⁷⁰ Upham, II. 85.

⁷¹ Upham, II. 251.

⁷² Upham, I. 248.

⁷³ Upham, I. 252 : II. 85, 252.

⁷⁴ Upham, II. 252.

⁷⁵ Upham, I. 253 : II. 85, 86, 252 : Davy's *Ceylon*, 301.

⁷⁶ Upham, II. 84.

⁷⁷ Upham, II. 83.

tion on the ministry of the revived church : and these foreign monks brought with them their books to form the nucleus of its new literature.

Sir Emerson Tennent guesses that this kingdom of Aramana may be a part of the Indo-Chinese Peninsula, probably between Arracan and Siam :⁷⁸ and Turnour⁷⁹ had already, without giving any authority, fixed it in Arracan ; but the passages in the *Rājaraṭṭakari*,⁸⁰ the *Rājapālī*⁸¹ and the *Mahāvaṃsa*,⁸² in which it is mentioned, clearly locate it on the Coromandel coast : and, as it is not Pāṇḍya nor Chōḷa, the only part of that coast which remains is that which lies between Chōḷa and Kālīṅga, namely, the old dominions of the Pallavas.

It is possible that the following passage in General Fytche's *Burma*⁸³ may in some way be connected with this Ceylonese legend :—"In 1080 A.D. [which falls in the reign of Mahala Vijayabāhu] the Talaiings were conquered by Anauratā, the Burmese king of Pagān, who burnt and sacked Thatūn, and took away with him to Pagān the Buddhist scriptures brought by Buddhaghōsha, as also the most learned of the priesthood;" since, besides the coincidence of time, the name of this Burmese king corresponds with that of "the foreign king," 'Anoorudda,' the friend of Vijayabāhu, as given in the *Mahāvaṃsa* version of the tradition.⁸⁴

His son Parākramabāhu, A.D. 1153 to 1186, maintained this revival on the orthodox basis of the *Tripitaka*,⁸⁵ even in the midst of the excitement of rebellions, invasions and counter-invasions;⁸⁶ he provided two libraries in the palace which he erected for the head of the Mahāvīra monastery,⁸⁷ and restored a hundred and twenty-eight libraries elsewhere.⁸⁸ The *Abhidhānappadipikā*, a Pāli dictionary, was compiled in his reign.⁸⁹

His queen, Līlāvati, was a Pāṇḍyan princess⁹⁰ and a patroness of learning ; and during her triple reign, A.D. 1197, 1209 and 1211, she specially patronized the author of the

Dāthāvaṃsa. This work is mentioned in the Turnour recension of the *Mahāvaṃsa*;⁹¹ and, that being so, the date of this recension of the *Mahāvaṃsa* has to be brought down to some time later than the reign of queen Līlāvati in the 12th and 13th centuries, instead of standing in the 5th century A.D. as its commentator tried to persuade his readers. A commentary on the Sanskrit grammar of Chandragāmi glosses on the *Samanta-pāsālikā* commentary on the *Vinaya* and on a commentary on the *Anguttara*, the *Vinaya-saṅgaha*, and other works in the Pāli and Sinhalese languages, were written in her reign,⁹² which was a period of unusual literary activity, her Pāṇḍyan friends probably contributing their share of materials for it.

Paṇḍit Vijayachakka, A.D. 1186, was a learned prince and a Pāli scholar, and he composed poems in that language.⁹³ Hardy⁹⁴ doubtfully supposes this king to be the author of a commentary on Buddhaghōsha's *Viṇḍhi-mārga*, but his short reign precludes the supposition that he could have written a work of that magnitude while he occupied the throne. Perhaps it belongs to the reign of one of the other Vijayachakkas.

The new life which had thus been given to Ceylonese Buddhism was not destined to last much longer ; a series of weak reigns, with a fresh series of invasions from the continent of India, followed rapidly upon each other from A.D. 1196 to 1255 ; and these invaders "began to destroy both the country and religion;" the monks were "hunted from place to place and had lost all their books by the Mahabars;" and, to crown the destruction, the last of these invaders made the reigning king prisoner, put out his eyes, "and extirpated the established religion." The recently resuscitated literature of the island naturally fell in for its share of these calamities : and at length "all the books which had been written [from the time of Valagam Abhaya] had been from time to time destroyed by the Mahabars," so that on

⁷⁸ Introd. p. xv.

⁷⁹ Upham, II. 86, 87.

⁸⁰ Upham, I. 293.

⁸¹ Upham, I. 253.

⁸² Upham, I. 253. The intermediate reign of Vikrama-bāhu, A.D. 1127, is passed over lightly in the legends. His daughter is the heroine of the *Ratnāvalī* (Wilson, *Hindu Theology*, II. 314.). Phayre, *History of Burma*, p. 37, dates that Anaurathā is said to have communicated with Ceylon direct, and that he invaded Arracan pp. 37, 66.—Ed.

⁷⁹ *Ceylon*, I. 106, note.

⁸¹ *ib.* II. 147, 252, 254.

⁸³ Vol. II. 170.

⁸⁵ Upham, I. 271, 298. II. 86, 252.

⁸⁶ Upham, I. 280, 287, 292, 296, 298. II. 87, 253.

⁸⁷ Upham, I. 300.

⁸⁸ Upham, I. 312.

⁸⁹ Turnour, Introd. p. xxxvii.

⁹⁰ *Journal, As. Soc. Bengal*, VI. 258. Mutu Coomāra Swāmy's *Dāthāvaṃsa*, 24. Turnour (*loc. cit.*) sometimes confounds the Pāli *Dāthāvaṃsa* with the Sinhalese *Dāthāvaṃsa*.

⁹¹ Turnour, 241.

⁹² *Dāthāvaṃsa*, Introd. p. xix. 80.

⁹³ Upham, I. 313.

⁹⁴ *Mon. Bod.*, 512.

their recall "the priests for want of books to remind them of their duty had forgotten to know good from evil."⁹⁵

Period V.

From the 13th century A.D. to the present time.—Kalinga Vijayachakka, A.D. 1235 to 1266, succeeded in rescuing Ceylon from these usurpers,⁹⁶ and he made great efforts to revise its old theology and to restore its lost literature.⁹⁷ He caused copies of the *Tripitaka* to be made at great expense, and placed one of them in every village throughout the island; he employed the more learned to teach the younger and more ignorant of his monks, and he sent to India for ten monks to confer ordination in his new church.⁹⁸ Thus a complete re-establishment of Buddhism was effected in his dominions after its complete extirpation in the preceding reigns. This new order was once more built upon a foreign basis, and its new literature, which may be regarded as the nucleus of all the present literature of the island, was in the first instance obtained from the Chôlas of Southern India, who had by this time annexed the Pallava and Eastern Châlukya provinces on the coast to their original dominions in the basin of the Kâvêri.

His valiant son, Parâkramabâhu III., A.D. 1266 to 1301, maintained and greatly extended his father's work; he procured learned monks from the Chôla country to teach the *Tripitaka* to his people; he obtained books also from Southern India, and he settled a new local canon of the Buddhist scriptures.⁹⁹ Moreover, he himself taught his brother the orthodox doctrines of his religion, and caused him to teach them to the monks in his monasteries, and he still further popularized the revival by causing several portions of the scriptures to be translated into (apparently) the vernacular Sinhalese.¹⁰⁰ The *Pâjavalîya*, one of the Sinhalese historical authorities, was written in his reign,¹⁰¹ so also was the continuation of the *Mahâvamsa* from the reign either of Mahâsêna or of Mahâ-

nâma down to the present reign,¹⁰² and I do not see any reason to suppose that he did not, at the same time, at least recast the earlier portions of that work.

Bhuvanêkabâhu I., A.D. 1303 to 1314, made the contents of the *Tripitaka* still more widely known by multiplying copies of it and distributing them to all the monasteries of his kingdom.¹⁰³ and another legend¹⁰⁴ states that the copies which he so multiplied were of two only of the three *Pitakas*, while a third legend¹⁰⁵ confines them to the *Sûtrapitaka* alone.

Upon his death the old clouds began again to roll up darkly over the island: a Pândyan army landed upon its shores, "and began to lay waste the country and extirpate the religion of Budha."¹⁰⁶ This time, however, the troubles lasted but a short time, and the new king, Parâkramabâhu IV., A.D. 1314 to 1319, succeeded in making peace with the enemy.¹⁰⁷ This prince's tutor taught him to be interested in the *Jâtakas*, or legends of Buddha's numerous incarnations; he had them translated into the Sinhalese language, and, after the translation had been revised by competent scholars, he distributed copies of these legends throughout his dominions, placing the original in the custody of his chief priest.¹⁰⁸

For nearly a century after the close of this king's reign the Ceylonese legends are barren of all literary notices, with the single exception of the appearance of the *Nikâya-saṅgraha*, one of the minor historical authorities in the Sinhalese language, which is assigned¹⁰⁹ to the reign of Bhuvanêkabâhu IV., A.D. 1347 to 1361.

In the 15th century Parâkramabâhu VII., A.D. 1410 to 1462, caused new commentaries to be written upon the Buddhist scriptures, apparently in the Sinhalese language, and he rewarded the authors of these expositions with grants of land and promoted them to higher orders.¹¹⁰ Possibly these may be the Sinhalese commentaries on Buddhaghôsha's *Visuddhi-mârga*: if, as is probable, they were

⁹⁵ Upham, I. 318, 319, 322, 323; II. 93, 95, 97, 98, 256, 257, 259.

⁹⁶ Upham, I. 319; II. 94, 257.

⁹⁷ Upham, I. 322; II. 97ff., 258.

⁹⁸ Upham, I. 324; II. 98, 106, 257, 259.

⁹⁹ Upham, I. 330, 331; II. 106, 261.

¹⁰⁰ Upham, I. 344.

¹⁰¹ Turnour, *Introd.* p. ii.; Hardy's *Man. Bud.*, 318.

¹⁰² Turnour, *Introd.*, p. ii.

¹⁰³ Upham, I. 354; II. 354.

¹⁰⁴ Upham, II. 197.

¹⁰⁵ Upham, II. 259.

¹⁰⁶ Upham, I. 355; II. 168, 263.

¹⁰⁷ Upham, I. 355; II. 108.

¹⁰⁸ Upham, I. 356; Upham's *History of Buddhism*.

32.

¹⁰⁹ Turnour, *Introd.* p. ii.

¹¹⁰ Upham, II. 113.

written at this time.¹¹¹ The *Saddharmalaṅkāra* also belongs to this king's reign.¹¹²

There are no indications in these books that Ceylon derived any of its literature from India at a later date than this; the last embers of Buddhism were then fast expiring there. The more recent sources of this literature were the Buddhist countries to the east of the Bay of Bengal, which had originally obtained their religious books from Ceylon.¹¹³ There was a constant commercial intercourse with these countries from early times, frequent interchanges of complimentary and religious embassies also took place between their sovereigns,¹¹⁴ and their canonical scriptures are identical with those of Ceylon.¹¹⁵ The monasteries of the maritime districts of the island enriched their libraries from time to time by fresh additions of manuscripts brought to them by ship; and it is still in these seaside monasteries alone that the *Tripitaka* is to be found complete.¹¹⁶ Some of these contributions were probably enough a restoration of some of the lost books of Ceylon, which had been carried to those countries by the Ceylonese monks when fleeing from their persecutions at home, and others were copies of the older manuscripts translated in the

characters of their new homes. Professor Oldenberg has informed us¹¹⁷ that all the manuscript copies of the *Dīpaṇṣa* which he used for his work bear marks of having been derived from one and the same Burmese original; and the first discovered copy of that work was written in the Burmese character, and was found by Mr. Turnour amongst some manuscripts which had been brought to Ceylon from Siam.¹¹⁸ It was also from that collection of Siamese manuscripts that he obtained a reliable copy of the commentary on the *Mahāvamsa* which he used for his translation of that work. The Colonial Library of Ceylon contains manuscripts which were presented by the king of Burma,¹¹⁹ and the monastery-libraries of the island possess manuscripts which were "brought from the Camboja country," written in the character which is used there.¹²⁰ The Mutaliyār, George Nadoris, brought back to Ceylon a valuable collection of Pāli books on his return from Siam in A.D. 1812.¹²¹ Previous to this time an embassy of Buddhist priests from Siam arrived in Ceylon in A.D. 1758, bringing presents of books with them, and similar earlier religious missions from that country brought similar complimentary presents with them.¹²²

FOLKLORE IN WESTERN INDIA.

BY PUTLIBAI D. H. WADIA.

No. XII.—*The Artist's Stratagem; or the Princess who was resolved never to marry.*

Once upon a time there lived a great Rājā, who had an **only daughter**. She was very beautiful and highly accomplished, and numbered amongst her other favourite pursuits that of **hunting**. She frequently went long distances on hunting excursions with a number of attendants, and penetrated the deepest recesses of the forest in search of sport.

One day, as she was galloping after a fine buck, she all of a sudden found herself in a dense forest, and saw that she had ridden considerably ahead of her followers. So she

waited for a time and then climbed up a tree to try if she could see some signs of them in the far distance or find some way out of the forest; but on gaining the topmost branch she was appalled to **see a great fire** in the distance,—evidently a part of the forest in flames.

The poor princess was, as it were, nailed to the spot at this awe-inspiring sight, and stood there watching for hours the fork-tongued monster wrapping trees and shrubs, as well as the haunts and homes of numberless birds and beasts in his fiery embrace, and destroying everything that came in its way. She could

¹¹¹ Hardy, *Man. Bud.* 512.

¹¹² *ibid.* 518.

¹¹³ Turnour, *Introd.* p. xxx. Hardy, *E. Monach.* 365. Bigandet, *Introd.* p. ix.: Tement's *Ceylon*, i. 416.

¹¹⁴ Tennent's *Ceylon*, i. 416, 607 ff.

¹¹⁵ *Journal As. Soc. Beng.* vi. 503. Turnour, *Introd.* p. xxx.: Hardy's *E. Monach.* 330.

¹¹⁶ Turnour, *Introd.* p. xxx.

¹¹⁷ *Dīpaṇṣa*, *Introd.* p. 11.

¹¹⁸ *Jour. As. Soc. Beng.*, vi. 790; vii. 922.

¹¹⁹ Oldenberg's *Dīpaṇṣa*, *Introd.* p. 10.

¹²⁰ Uppham, III. 171, 185.

¹²¹ *Journal As. Soc. Beng.*, vi. 790; Turnour, *Introd.* p. xxxi.: Hardy, *E. Monach.* 328.

¹²² Turnour, *Introd.* p. ii.

see whole herds of deer and cattle running about in a mad frenzy at their inability to find their way out of what seemed to them to be certain death, and birds, of strange and varied plumage, suffocated by the thick smoke and unable to fly in the heavy atmosphere, charged with flying embers from the great fires around, uttering piercing screams of anguish before yielding to their inevitable doom.

In the midst of all this scene of woe the good princess was deeply moved to see a **pair of wild geese** straining every nerve to **save their young ones** from the clutches of **the fire**. Their difficulty was enhanced by the facts that the poor little creatures had as yet no wings, and were therefore totally unable to take care of themselves, and that it was beyond the old birds' strength to carry them in their beaks, as they tried hard to do, away from the closely pressing flames. So they flew about distractedly here and there, not knowing what to do, till the fire came too near to leave them any hopes of saving either themselves or their young ones. Just, however, as the flames were about to catch the nest, the old **male bird**, not wishing to sacrifice his own life, since he was unable to save those of his family, made a last desperate attempt, and with one effort found himself **safe out of the reach of danger**; while at the self-same moment the poor **mother goose**, as if resenting his selfish conduct, threw herself like a canopy over her unfortunate brood, and, with a wild scream of anguish, suffered herself to be **burnt in the flames** that just then closed over her and her innocent off-spring.

The princess, who had watched all this with growing interest, was deeply touched at the sight. "Ah," said she to herself, "how **selfish** and false these **males** are! I am sure they are the same all the world over, whether they be birds, beasts or men! I shall therefore neither have anything to do with them, nor trust them; nay I shall **continue single** all my life rather than marry one of them."

Hardly had the princess formed this rather rash resolve when she perceived her attendants coming towards her. They had come there to look for her, and when she got down and joined them they were highly delighted, for they had given her up for lost.

But from this day forth our heroine wore a

grave look, shunned the society of all her male friends, and declared to her parents her firm determination never to enter the bonds of matrimony. This caused the old people great grief, and they implored her to tell them what had made her form so unwise a resolution. But the princess remained silent and would give them no explanation, so at last everybody came to believe that the king's daughter was not for marriage, and the number of suitors for her hand consequently fell off.

One day it happened that a great and renowned artist paid a visit to the great Râjâ's court, and by His Majesty's command executed some very rare paintings for the royal palace, and when the time came for his departure he begged of the beautiful Princess to give him a few satrugs, to which she agreed after great hesitation, and allowed him to draw upon canvas a faithful likeness of her 'fair face and figure. In a few days **the picture** was finished, but the artist, instead of handing it over to the princess, quietly went out of the city with it.

Now, the artist knew of an old Râjâ, who was a great connoisseur of paintings, so he went straight up to him with the princess's portrait, and sold it to him for a large sum of money. The picture was duly hung up in the great hall of audience, where it soon became the cynosure of all eyes and the topic of universal admiration, and all who looked upon it were struck with the enchanting beauty of the fair subject, and wondered very much who the original could be.

A few days after ~~this~~ it happened that the king's only son and the heir to his throne, who was away hunting when the picture was purchased, returned to the capital, and as soon as **he saw the picture fell heels over head in love** with the lovely image on the canvas, without even taking the trouble of ascertaining who the original was. He gave up all enjoyment, shunned all pleasure, and moped away in silence in a corner of the palace, to the great grief of his aged father, who, when he learned the cause of his son's sorrow, felt very anxious about his health, and sent messengers in search of the artist, with a view to find out who was the subject of his picture. But all search proved fruitless, for the artist had long left the country and gone away, nobody knew where.

This vexed the young prince still more, and told so very badly upon his health and his temper that he grew highly capricious and headstrong, and regarded everyone with the greatest disfavour. One day the **prime minister**, an old and trusted servant of the State, happened to arouse him by mistake from a reverie into which he had fallen, and he lost his temper to such an extent as to **sentence** the poor old man to **death** there and then. Now, in the old Rājā's palace the young prince's word being law, the old man saw nothing for it but to submit to his doom. As he was, however, being led away to execution the old Rājā heard of it, and summoning his son into his presence, prevailed upon him to grant the old man a remission of his sentence for a few days, so that during that period he might make over charge of his public and private duties to other hands. To this the prince, after some difficulty, consented, and the old prime minister was allowed to go home to his family for the time.

He was resolved not to distress his family by telling them of the doom that awaited him, but they soon suspected from his pale and careworn look that something was wrong with him. They dared not question him, however, for some time, till his **youngest daughter**, who was a great favourite, at last put together all her courage, and, by her winning and persuasive ways, succeeded in learning from him the cause of his sorrow.

Now this young lady was very clever and full of resource, so she soon found a way of getting her father out of the difficulty. She went in person to the young prince, and, having succeeded in getting an audience, begged very hard of him to **spare her old father's life** till such time as she herself could go abroad and make an effort to **find out who the original of that wonderful painting was**, and in what part of the world she lived.

This pleased the prince very much, for in the scheme which the young lady untold to him he saw some prospect of realizing what was to him at the best a dream. He therefore readily withdrew his terrible mandate, and the good old prime minister was once more welcomed by the Rājā, who gladly restored him to his former high position.

Soon after this the prime minister's daugh-

ter began to prepare for her journey. At first she set to work and drew a faithful copy of the great artist's picture, and then, dressing herself in **male attire**, set out on her travels as an artist bound to some distant country. She had an arduous task before her no doubt, for she hardly knew which way to go and where to inquire about the princess, but filial affection lent her courage, and she firmly resolved either to find out the princess or perish in the attempt.

So she travelled on and on for many months, and showed the picture wherever she halted, and to all she met, in the hope that it would be identified, but all to no purpose. At last, after more than a year's weary wandering, she arrived at a very distant and, to her, a very strange country, and there, to her great joy, everyone who saw the picture pronounced it to be a true and speaking likeness of the daughter of the Rājā of the country: "she," they said, "who is determined never to marry."

"Never to marry!" said the fair artist in surprise, "and what has made her form such a strange resolve?"

"Nobody can tell," was the reply, "even her parents do not know it."

This news somewhat damped the ardour of the prime minister's daughter, for it was quite an unforeseen emergency, and she was at a loss to know how her mission could be successful with one who was thus determined never to enter the bonds of matrimony.

Nevertheless, she took heart, and, hiring a house in close proximity to the Rājā's palace, opened her studio there. Each day she sat there near a window which commanded a view of the palace, and worked away with her paints and brushes, till at last the Rājā's attention was drawn towards her. So one day the Rājā summoned her into his presence, and, after closely examining all her pictures and other works of art, extolled them highly and honoured her with a commission to execute some paintings for a palace which he was then building for the especial use of his favourite and only daughter. The fair artist willingly obeyed the king's command, having in the meanwhile seen the princess several times with her own eyes, and made sure that she was no other than the original of the picture which had

driven her prince well-nigh out of his senses. Accordingly, when the palace was ready, she went there and set to work painting the most artistic and lovely designs she could imagine on the walls, under the arches, and in every likely place. The Rājā and all the nobles and even the ladies of the court paid occasional visits to the palace, and they all, with one voice, admired both the workmanship of the artist and his choice of subjects. Each picture seemed to be a study in itself, and each had a history of its own which the artist related in a most interesting and winning manner. This latter fact drew a number of other female visitors to the palace, amongst whom were the ladies in immediate attendance on the princess, and these the artist thought were the persons most likely to know and tell her the reason why the princess shunned the society of men, and why she was determined never to enter into wedlock.

So she soon set to work and won them over to her with her persuasive arts and delightful ways, and succeeded in learning from one of them, to whom the princess had confided her secret, the true story of her adventure in the forest and her consequent determination.

This was all the artist desired, and directly afterwards she drew on one of the walls of the drawing-room a picture just the reverse of what the princess had seen in the forest—**a picture representing the infidelity of the female and the devotion of the male.** For the geese she substituted a pair of antelopes, while in place of the princess she made to stand a very handsome young prince, so young, so brave, and so handsome, as to win the heart of any woman.

When this picture was ready our artist persuaded all the lady friends of the princess to request her to come and have a look at it, and at last one day, to her great joy, the princess honoured her with a visit, and going from picture to picture highly admired the artist's skill. When, however, she at last came to the picture of the antelopes and the prince she seemed greatly surprised and stood for a while lost in thought. Then, turning to the artist, she said:

"What is the history of this picture, my good friend?"

"O fair princess!" replied the disguised

daughter of the prime minister, "this picture represents an adventure the prince of our country had some time ago in a forest—perhaps it might not interest you much, madam, though it concerns us, loyal subjects of his father, very nearly, as this very episode in our prince's life has brought a change over his whole existence, for since that time he has shunned all thoughts of marriage, as he believes that the fair sex are all false and faithless and that it is of no use to trust them. This determination of his son and heir causes our good old Rājā great grief, and has thrown a gloom over his whole court."

"How strange!" cried the princess, interrupting the artist. "can males then be faithful and females false? I, for one, always believed it was the males who were false and faithless everywhere on earth; but now I see that there are two sides even to this question. I have as yet observed but one instance, and have since then been labouring under a false impression, but I shall not judge men so harshly hereafter."

"O! I am so glad to hear you say so, good princess," cried the artist in delight; "how I wish our good prince too would see his mistake as you do yours."

"Some one should point it out to him, I think," said the princess, "and perhaps, like me, he too might change his mind. As I have benefited by an episode in his life so he might profit by one in mine, and therefore you are at full liberty to relate my case to him and see what effect it has on him."

"Surely I shall, with the greatest pleasure, when I get home," replied the artist, her little heart fluttering with joy at this unexpected success in her undertaking.

Now, from this day it became known all throughout the Rājā's dominions that the fair princess had conquered her aversion to matrimony, and was once more open to offers of marriage, and there was again a crowd of eager aspirants to her hand. But the princess studiously discarded all their attentions, and seemed to derive no pleasure from their company. Her chief delight was in looking at the pictures the artist had painted in the new palace, and talking to her solely about the young prince, in whom she felt greatly interested.

The fair artist, thereupon, to secure the interests of her Rājā's son, fanned the flame by telling her strange and vividly-coloured stories of his manliness, valour and virtues, till at last she inspired her with such a love for him that one day, being unable to contain herself, the princess expressed an earnest desire to see him. This was the very thing the clever young lady desired, and she readily promised to go back to her country and do all in her power to bring her prince to the feet of the fair princess by telling him her story and thereby creating in him a desire to see her.

Great was the joy both of the old prince

minister, her father, and the gallant young prince when our fair artist returned home after a long absence, and related to them the successful termination of her mission. The old man hailed her as the saviour of his life, and the young prince loaded her with honours and precious gifts.

Immediately afterwards the prince set out with a grand cavalcade and a magnificent train of followers for the court of our fair heroine's father, and, needless to say, he was soon accepted as a worthy suitor for the fair princess's hand, and in the course of a few days their union was celebrated with due *éclat* and rejoicings.

CHINGHIZ KHAN AND HIS ANCESTORS.

BY HENRY H. HOWORTH, F.S.A.

(Continued from p. 114.)

When the Taijuts had withdrawn, Temujin said to himself: "Lately, when I was taken round from one encampment to another, while I stayed in the house of Sorkhan Shira, his sons, Chinbo and Chilaoun,¹⁵ shewed me sympathy. At night they removed the wooden collar and allowed me to rest at ease. To-day Sorkhan himself has concealed my whereabouts from his companions and has done so more than once. I will go to him. Assuredly he will protect me." He accordingly went along the Onon looking for Sorkhan's *gurt*, which could be recognised from afar from the noise made by the machine for making *kumiz* (the *Altan Topchi* says the noise made in mixing the milk for making arrak) which went on from morning till evening.

Guided by this noise Temujin found the *gurt*, and when he entered it Sorkhan said to him. "I told you to go and seek out your mother and brothers, why have you come here?" His sons, Chinbo and Chilaoun, said: "When a small bird is chased by a hawk it hides itself in the grass. If we do not offer shelter to a man who flies to us we shall be behaving more ungraciously than the grass." They then removed the cage and buried and hid him in a load of sheep's wool which was standing at the back of the *gurt*, and told their sister Khadaan¹⁶ to look after him, and to say nothing about it. The *Altan Topchi* says they told her to lie down beside him.

On the third day the Taijuts said to one another: "Has not some one hid Temujin? Let us search our camp." They accordingly began a search, and they looked over Sorkhan's *gurt*, his *kibitka* and under his couch. They then went to the cart loaded with wool and commenced to throw the wool out. When there remained only the back part to be searched, Sorkhan said: "Could a man in such a hot season exist under this wool?" They then left off their search and left. When they were some distance off Sorkhan said to Temujin: "You have nearly been my destruction; you have nearly blown the fire out of the ashes."¹⁷ Go now and search out your mother and your brothers." He thereupon gave Temujin a mare which had never foaled, which had a yellow body and a white face, and unfastened its strap, as is customary still among the Mongols when presenting a horse. He also gave him a fat roasted lamb which had been fed with the milk of two ewes,¹⁸ some mare's milk in a skin, and a bow with two arrows, but not an instrument for making fire.¹⁹

This quaint saga is reported at length in the *Yuan-ch'ao-pi-shi* and also in the *Altan Topchi* and by Ssanang Setzen. The two latter authorities call the Suldaz who helped Temujin Torgban Shara. I have, in one or two difficult passages, where the Chinese Editor of the *Yuan-ch'ao-pi-shi* seems to have misunderstood his author, used the version in the *Altan Topchi*.

¹⁵ Called Chimbai and Chilaoun by Ssanang Setzen.

¹⁶ Called Shiluzhukhan Khatakhian by Ssanang Setzen.

¹⁷ i.e. destroyed him.

¹⁸ The *Altan Topchi* says a two years old kid.

¹⁹ *Yuan-ch'ao-pi-shi* pp. 43 and 44.

The story is also told with very slight variation by Rashîdu'd-dîn in his account of the Suldaz tribe, and also by El Benaketi. Rashîdu'd-dîn also tells us that while Temujin was a prisoner and encumbered with the heavy wooden collar an old woman named Taiju Iggeh,²⁰ who had married a Merkit, treated him with kindness, combed his hair and put a piece of soft felt over a sore which had been caused on his neck by the rubbing of the collar.²¹

Temujin now set off to find his family, he passed the site of his recent adventures, and then went along the Onon. Having reached the river Kimurkha or Tsimurki, which we are told falls into the Onon on the west, he noticed some footmarks on its banks. He went up this small river. Near it we read there is a hill called Beter, opposite which is another small hill called Khorchukui. Here he found his mother and his brothers, with whom he moved to the mountain Burkhan.²² There is there, says the *Yuan-ch'ao-pi-shi*, a mountain called Gulialgu, whence flows the river Sangur (doubtless the Sungher, an affluent of the Kerulon). Near this river is the small mountain called Kharachiruge and a green lake. Further on the same author calls it Kukunur, and the Chinese commentator Si-Sun suggests that it may refer to lake Kukusher, if this is not too far off.

Here Temujin built himself a *yurt*, and caught moles and steppe mice, on which he fed himself.

Some time after this some thieves²³ stole eight of Temujin's horses. They left him a light yellow one, on which Belgutei had ridden off to catch these animals.²⁴ On his return with a number of moles he had caught Temujin told him what had happened. Belgutei and Khasar both volunteered to go in pursuit of the robbers, but Temujin said he would go himself. He accordingly went off, and in three days came upon a drove of mares, among which was a boy milking, whom he asked if he had seen the stolen horses. He replied that before sunrise they had been driven past there and offered to show him the direction. He allowed Temujin to fasten his horse, and also allowed him to change it for a white horse with a black band on its back.²⁵ He then hid the skin and

leather milking gear in the grass and said to Temujin: "You are quite tired with your journey; I will be your companion and help you to recover the horses. The troubles of young men ought to be shared. My father is called Nakhu-boyan, I am his only son, my name is Burchu." The two rode together for three days along the track made by the horses' feet. At length they reached an enclosure inside which were the eight horses. The *Altan Topchi* says a number of Taijuts who were on guard around had fallen asleep. Temujin wished to enter the enclosure alone, but Burchu insisted on accompanying him in his dangerous work. They succeeded in driving away the horses. The kidnappers now gave chase, one of them, seated on a white horse, held a lasso in his hand and had almost overtaken them, when Temujin turned to shoot at him, whereupon he fell back, and as it was getting evening the robbers drew away.

The two boys now made for the residence of Nakhu-boyan. Temujin then said to Burchu: "Without you I could not have recovered the horses; let us divide them; which will you have?" Burchu replied that he had accompanied him because he saw he was weary, and he did not see why he should ask for what was not his. "I am the only son of my father, and there is enough wealth for me, I don't want yours. If I were to demand anything from you how should I be your comrade?"

When they entered the *yurt* of Nakhu-boyan they found him in tears for the loss of his son, and on seeing him again he scolded him. Burchu explained the cause of his absence, and then rode off to fetch the leather skins and apparatus with the milk which he had hidden. He killed a fat lamb which had been fed on the milk of two ewes, filled a leathern skin with mare's milk, and gave them all to Temujin for his journey. Nakhu-boyan said to them: "You are both young. Mind you remain friends, and in the future do not forsake each other." Temujin now set off home again, and in three days reached the banks of the Sangur, where his mother and his brothers were delighted to see him again.²⁶ According to the *Yuan-*

²⁰ So called because she was a Taijut.

²¹ Erdmann, Temujin, 210-211.

²² i.e. to the Kentei.

²³ The *Altan Topchi* says they were Taijuts.

²⁴ The *Altan Topchi* and Ssanang Setzen says marmots.

²⁵ The *Altan Topchi* calls the horse the swift short-eared piebald.

²⁶ *Yuan-ch'ao-pi-shi*, pp. 45-47.

chuan, or biographical part of the *Yuan-shi*, Burchu belonged to the tribe Arlat or Arulat.²⁷ The *Altan Topchi* calls him Kuluk Borguchi, son of Lakhu-boyan. Ssanang Setzen calls him Külük Boghorji, son of Nagho Boyan of the tribe Arulat. Gaubil calls him Porgi. Rashidu'd-din calls him Bughurjin or Burguji, and also tells us he belonged to the tribe Arlat or Arulat.²⁸

He also reports another occasion on which he befriended Temujin in his young days. A party of a dozen Taijuts having suddenly appeared Temujin found himself with only Bughurjin and Buraghul or Burgal Noyan of the tribe Hushin,²⁹ called Bughural of the tribe Ugushin by Ssanang Setzen. He advanced bravely to meet the enemy. They shot twelve arrows together at him, and he was struck in the neck and the mouth and fainted through pain. There was much snow about, and Buraghul warmed a stone with which he melted some of the snow and held his mouth over the steam which arose, so as to soften the clotted blood in his throat to enable him to breathe more freely. As the snow fell thickly Bughurjin took off his own mantle and held it over his friend to keep the snow off, and continued doing so till the snow reached up to his own girdle. He eventually took him to his house.³⁰ In the *Yuan-ch'ao-pi-shi* this incident is also referred to, Burchu alone being mentioned. It is said that he held his felt cloak over Temujin until dawn, only once changing from one foot to the other. The locality where it happened is there said to have been Talannemurgesi, near the Tatar country.³¹ In the *Yuan-shi* the incident is attributed to Borchu and Mukhuli.³² A third saga of a similar kind is reported by Rashidu'd-din. He says that once, when Temujin was far from his people and pressed by the enemy, Bughurjin and Buraghul sought in mountain and plain for food for him but found none. They had a fishhook with them, with which they fished in the river and caught a great fish. Bughurjin Noyan wished to draw it out, but failed on account of his terrible hunger and faintness and fell down. Temujin noticing

how weak and worn out he was, and that he had no flesh on his thighs, sighed aloud and said to Buraghul Noyan: "Be not sorrowful and disponding; I will take good care your legs are again covered with flesh."³³

Temujin was always faithful to his friends, and Bughurjin became eventually commander of the right wing of the Mongol army and the first subject of the Empire. Bughural was successively promoted to the post of *bukarl*, i.e., chief cook; *bararché*, i.e., a kind of chamberlain; centurion of the body-guard; millenarian, chief of a *tuman*, i.e., of 10,000 men; and, lastly, second to Bughurjin in command of the right wing. He was killed in a fight with the Tumeds.³⁴

To return to Temujin. As we have seen, he had left his betrothed in her father's house on his return home at the time of his own father's death. We are told in the *Yuan-ch'ao-pi-shi* that he now set off with his brother Belgutei to fetch her home. He rode down the Kerulon until he reached the valley between the mountains Chekeher and Chikburkhu, where the father of his bride, Dai Setzen, lived. He was pleased to see him, and said he feared he might not see him again, since the Taijuts had taken such a dislike to him that it might have gone badly with him. He now gave his daughter Barté to him for his wife, and he and his wife Sotan accompanied them on their way home again as far as Urakhchuel on the Kerulon. At that point he turned back, but his wife Sotan went with the young couple right to their very home and then returned. This was in accordance with the Mongol custom, which prescribes that the relatives, except the father, shall accompany a bride to her new home. Temujin now wished to have Burchu as a companion and he sent Belgutei for him. Without telling his father he set off at once on his hump-backed tawny horse and wearing his black furskin, and thenceforward he was Temujin's constant companion. The latter now struck his tent on the river Sangur and moved to the upper valley of the Kerulon and planted himself at the foot of the Burgi.³⁵

²⁷ *id.* note 117.

²⁸ Erdmann, *Temujin*, p. 205.

²⁹ *id.* 209, D'Ohsson, p. 1, note 157.

³⁰ Erdmann, pp. 205-206, D'Ohsson, Vol. I. pp. 43 and 44.

³¹ *op. cit.* page 116.

³² *Ibid.* *id.* note 446.

³³ Erdmann, p. 206.

³⁴ *Ibid.* *infra*, D'Ohsson, Vol. I. p. 157, note 1. Erdmann, p. 209.

³⁵ i.e. the Birgalaba, a branch of the Kentei, south-east of the source of the Kerulon.

RAJIM STONE INSCRIPTION OF JAGAPALA OF THE KULACHURI YEAR 896.

BY PROFESSOR F. KIELHORN, C.I.E.; GÖTTINGEN.

This inscription, which I edit from two fairly good rubbings supplied by Sir Alexander Cunningham, and sent to me by Mr. Fleet, was first brought to public notice in 1825, when Mr. (afterwards Sir) Richard Jenkins presented to the Asiatic Society of Bengal a copy of it, together with a translation prepared with the assistance of the Pandits, from which Prof. H. H. Wilson published a Dēvanāgarī transcript and a kind of translation, in the *Asiatic Researches*, Vol. XV., page 512 ff. It has last been referred to by Sir A. Cunningham, in the *Archæol. Survey of India*, Vol. XVII. page 18.

The inscription is on a wall of the temple of Rāmachandra at **Rajim**, a town in the **Rāypur District** of the Central Provinces, on the right bank of the Mahānadi river, about twenty-four miles to the south-east of Rāy-pur.¹ It consists of 19 lines.—The writing covers a space of about 2' 3½" broad by 1' 1" high, and appears to be well preserved throughout. The size of the letters is from ⅓" to ½". The characters are Dēvanāgarī.—The language is Sanskrit, and, excepting the first and about half of the second line, a portion of line 15, and lines 17-19, containing the names of the composer and of the engraver, and the date, the inscription is in verse. It was composed by the *Thakkura* Jasānanda, son of the *Thakkura* Jasodhara, of the Ayōdhyāpuriya family; written, as well as engraved, by the artisan Ratnapāla.

In respect of orthography, the observance of the rules of euphony, and of grammar generally, the inscription is full of mistakes of every description. As regards orthography, the dental is frequently put for the palatal sibilant, and *ba* is denoted by the sign for *va* everywhere except in *mahāsabala*, line 1. Besides, the dental *n* is put for the guttural *ṇ* in *alankṛita*, line 1; for the palatal *ṇ* in *anuranjaka*, lines 2 and 17, *pancha*, line 5, *satyan=cha*, line 10, and *sāthitān=cha*, line 16; and for *anuseāra* in *Paṇḍita[ha]ṇsa*, line 2, *vinṣa*, line 5, and *vaṇṣe*, line 13. On the other hand, the lingual *ṇ* has taken the place of the dental *n* in *nihanyēt*, lines 7 and 8, and even in

ṇunar=ṇavē, line 12. *Kṣhya* we have for *khyā* in *vikshyātā*, line 5; *gha* for *ha* in *siṅghēna*, line 8; *jya* for *dya* in *bhacjyasya* (for *bhavēd=yasya*), line 2, *bhayājyasya* (for *bhayād=yasya*), line 7, and in *prāṇmukhājyasya* (for *prāṇmukhād=yasya*), line 8. A superfluous and altogether wrong *visarga* we find in *Sāhilla-nānāh*, line 2, *sahah*, line 4, *ratāh*, line 6, *survadāh*, line 14, *nāmah*, line 15, and even in the midst of compounds, in *kshatrigaḥkula*, line 8, *Ratnadēvaḥ-ṇṇipa*, line 9, and *sōbhaḥ-saṁkāsārtham*, line 14. On the other hand, the sign for the *visarga* has been omitted after *puttanai*, line 4, *maṇḍalē-carā*, line 7, and *gajā*, line 8. In other places which it is unnecessary to point out separately, we have *visarga*, where by the rules of euphony it ought to have been either dropped or changed to *r*, or where final *ah* ought to have become *ō*. And elsewhere again, as e.g. in *annj' putrā*, line 5, *Kaṁtēyō satyār*, line 12, final *ah* has been changed to *ō*, where that change ought not to have taken place.

To set the grammar right in every particular, it would be necessary to rewrite nearly the whole inscription, or to append more remarks to it than the inscription deserves. But to give an idea of the author's want of proficiency, I may point out some of his errors. The Potential mood he employs for the Imperfect tense in *ādhipatyam bhavjyasya* (for *ādhipatyam=aḥhavād=yasya*), line 2; *tasya=āṇṇj=bhavēd*=(for *bhavād=*) *bhrātā*, line 3; *bhāgyam cha bhavēt=putram* (for *Bhāgyaś=ch=aḥbhavāt=putraḥ*), line 3; and *nihanyēt* (for *nyahan*), line 7. Neuter or Accusative forms he most frequently uses instead of masculine or Nominative forms. Thus we find *grāmam*, *dēsam*, *putram*, *vikramam*, *viram* and many others used as Nominative cases, for *grāmah*, *dēśah* etc.; *prāsūtam kīrtitam=imam*, in line 14, as a Nominative, to express the meaning 'this temple was caused to be built'; *sāthitān=cha vasundharām*, in line 16, for *sāthitā cha vasundharā*. For the word *dhanvin* our author uses *dhanvina*, of which he forms the Nominative Sing. either *dhanvinō*, line 7, or *dhanvinam*, line 16. The Nominative Sing. of *mahābāhu* is *mahāvāhō*, line 6; that

¹ See Grant, *Gazetteer of the Central Provinces*, page 425.

of *bhagavat*, *bhagavantah*, line 15. In line 3 we have *ripavaḥ kshaya-kāriṇam*, for *ripūñām kshaya-kāri* or *ripūñām kshaya-kāraṇam*; in the same line the Genit. *tēśhām* for the Instr. *tauḥ*; in line 4 *navasataḥ grāmāḥ* for *navasatām grāmāḥ*; in line 6 *ēbhīḥ putrō*, probably for *anayōḥ putrō*; in line 18 *mahatkavi* for *mahā-kavi*, etc. Where an author has so imperfect a command of the language, it is sometimes difficult to guess what he really means to say; and, in the present case, this difficulty is occasionally increased by the loose way in which the several sentences or portions of sentences are connected with each other, or by the actual omission of important statements. Thus, to mention only one instance, we are obliged to guess that the lady Udayā, who is introduced to us in line 5, was married to one of the chiefs mentioned in the preceding lines; and it is not at all clear whose wife she was, and who therefore was the father of the chief Jagapāla, for whose glorification the whole eulogy was composed.

The inscription is dated, in lines 18 and 19, on Budhadina or Wednesday, the eighth lunar day, called *rathāśṭamī*, in the bright half of the month Māgha, in the Kulachuri² (or Kalachuri) year 896. And it records (line 14) that a personage named Jagapāla, also called Jagasimha (line 10), in honour of Rāma, had established "this temple" (presided over at the time by the venerable, the illustrious Mukṭātman, line 15), evidently the temple of Ramachandra, where the inscription still is, and had assigned, for the *navēdya* or offerings of eatables to the idol, the village of Sālmaliya.³

I have elsewhere* tried to show that the right equation by which to ascertain the corresponding English date for a date recorded in the Chēdi or Kulachuri era, is A.D. 248-49=0, or A.D. 249-50=Chēdi-samvat 1; and applying this equation in the present case,

² In the present inscription the spelling *Kulachuri* appears to me to be certain: in an unpublished inscription of the year 926 the word is spelt *Kalachuri*; and it is written in both ways in the Kumbha copperplate of Gosaladevi, published in the *Jour. Beng. As. Soc.*, Vol. XXXI page 116.

³ See *Asiatic Researches*, Vol. XV. page 501.—The Pandits say that there was formerly a village of that name not far from Raju, which was appropriated to the temple, but that the village has been since deserted, and in lieu of it a village called Rohna, erected not far from the ancient site of the former, was subsequently granted, and is still held by them."

I have found by Professor Jacobi's tables that the 8th lunar day of the bright half of Māgha, 896, corresponds to the 3rd of January 1145 A.D., which was a Wednesday, as required. On that day, at sunrise, the 8th *Tithi* of the bright half was current, and it ended 10h 59m after mean sunrise. By way of confirmation, I may be allowed to add that, as there was a solar eclipse about noon on December 26th, 1144, the following 3rd of January, under ordinary circumstances, would have been the 8th day of a bright fortnight. Why this 8th of the bright half of Māgha should here be described as *rathāśṭamī*, I have no means of ascertaining. In the works at my disposal, as, e.g., in the *Dharmasindhu*, the 8th of the bright half of Māgha is styled *Bhishmāśṭamī*, and it is the 7th of the bright half of the same month, that is called *rathasaptamī*.⁵

By far the greater portion of our inscription is taken up with the genealogy of Jagapāla, and with a recital of his own military exploits, as well as those of his ancestors; and, apart from the manner in which it is dated, the inscription is valuable as furnishing a comparatively large number of names of places and districts, most of which still await identification, and because of the references which it contains, to the reigns of the princes Jajalladēva, Ratnadēva and Prithvidēva, known to us also from other inscriptions.

As regards the genealogical and historical portion, the inscription opens by describing (lines 1 and 2) the *Ṭhakkura*, the illustrious *Sahilla*, the spotless ornament of the illustrious Rājamāla race, which gave delight to the Pañcha[ha]ṁsa race, as having gone forth from the Vāḍahara country, and as having been gladdened by the attainment of the *pañcha mahāśabala*, and furnished with a banner the flag of which had the lustrous appearance presented by a firefly sitting on a golden jar(?).

⁴ See *Nachrichten der Ges. d. Wissenschaften, Göttingen*, 1858, pp. 31-41.

⁵ So also the *rathasaptamī* of the month Māgha is mentioned in the Sāmāgaḥ grant of Dantidurga, of Śaka-Samvat 675 (*ante*, Vol. XI. p. 112, line 31). As regards the modern practice, Kero Lakshman Chhatre, Gaupat Krishnaji, Bapu Deva Shastri, the *Chavā-Paiching* (Jodhpur), and Pandit Umacharan Mahatman, all give Māgha sukla 7 as *rathasaptamī* and Māgha sukla 8 as *Bhishmāśṭamī*. But the *Sūrya-Paiching*, and another Indor almanac, while agreeing with the above in giving Māgha sukla 7, as *rathasaptamī*, allot the *Bhishmāśṭamī* to the *amānta* Māgha or *pūrṇamānta* Phalguṇa kṛishṇa 8.—J.F.F.]

This Sāhilla, who made valorous chiefs tremble and became lord of the land which he acquired on the battle-field, had a younger brother named **Vāsudēva**, and three sons, **Bhāyila**, **Dēsala**, and **Svāmin**, who conquered the **Bhaṭṭavila** (or **Bhaṭṭavala**) and **Vihara** countries. Svāmin had two sons, of whom the elder one, named **Jayadēva**, acquired the district of **Dāṇḍōra**, while **Dēvasimha**, the younger son, took the **Kōmō maṇḍala**. In line 5, the inscription goes on to mention a noble lady the *Thakkurājñi* **Udayā** who, to judge from the way in which she is introduced, must have been the wife of one of the two last-named chiefs, and the mother of **Jagapāla**, whose exploits are described in lines 6-11. Afraid of him, the valorous **Māyurikas** and the **Sāvantas**, who are called lords of *maṇḍalas*, betook themselves to the mountains. Moreover, during the reign of the illustrious lord **Jājalladēva**, Jagapāla conquered a country the name of which I am unable to make out; and, during the reign of the illustrious prince **Ratnadēva**, he acquired the **Talahāri** country and another district, about the name of which I likewise am doubtful. But Jagapāla's chief exploits appear to fall within the reign of the prince **Prithvidēva**, when he not only took the forts **Saraharāgaḍha** and **Mavakāsiha** [vā], and conquered the **Bhramaravadra** country, but also took **Kantāra**, **Kusumabhōga**, **Kāndasē[hva]ra**, and the district of **Kākayara**. Jagapāla would seem to have founded or rebuilt the town **Jagapālapura**, which is mentioned in line 12, in a verse which I am unable to explain properly. From lines 15 and 16 we learn that he had two younger brothers, **Gājala** and **Jayatsimha**; and, if I understand the words rightly, we are finally told that, during the reigns of the three princes mentioned above, the post of prime-minister was held by **Dēvaraja**, together with whom the three brothers Jagapāla, Gājala, and Jayatsimha subdued the earth.

From this brief abstract it will appear that, as was seen already by Sir A. Cunningham,⁶ Jagapāla and his ancestors were petty chiefs, generals or feudatories of the **Ratnapur** branch of the **Chēdi** rulers, whom they helped to extend their territory. Most of the places

and districts mentioned (some of which are mentioned also in other inscriptions) must undoubtedly be looked for in the eastern portion of the Central Provinces, but I have not succeeded in identifying more than one or two on the maps at my disposal. **Kākayara** has by Sir A. Cunningham been shown to be the modern **Kānkār**, which in the *Gazetteer of the Central Provinces* is described as a chiefship situated to the south of the Rāypur district; and it is possible that the concluding portion of the name which I read **Kāndasē[hva]ra**, may be identical with **Sēhāwā** or **Sihōa**, situated to the east of Kānkār. **Saraharāgaḍha** I take to be the modern **Sārangarh**, to the east of Rāypur; and, if this identification be right, the name **Bhramaravadra** would appear to have survived in **Bāmra**, the name of a feudatory state attached to the Sambalpur district, to the east of Sārangarh. The tribal name **Rājamāla** of Jagapāla has by Sir A. Cunningham been adduced to explain the origin of the name of the town **Rājim**, where the inscription is, and where Jagapāla or his ancestors may be supposed to have resided.

Of the fairly numerous inscriptions of the **Chēdi** rulers of **Ratnapur**, a memorandum of which was furnished by Sir R. Jenkins⁷ as early as 1825, only a single one (besides the one here re-edited) has been hitherto published, by Dr. Rājendralāl Mitra, in the *Journal Beng. As. Soc.* Vol. XXXII. pp. 280-287; but the contents of several of them have been referred to in the volumes of the *Archæological Survey of India*. To show the genealogy of the earlier rulers of **Ratnapur**, and what place must be assigned in it to the three princes **Jājalladēva**, **Ratnadēva**, and **Prithvidēva**, mentioned in the present inscription, I shall give here the necessary data also from three other inscriptions, the text of which I shall publish elsewhere from rubbings supplied by Dr. Burgess.

1.—A **Ratnapur** inscription of **Jājalladēva**, dated Sāmvat 866, Marga Śn. di. 9. Ravau. = Sunday, 8th November, 1114, A.D., contains the following genealogy:—The Moon, Kārtavīrya, Hāhaya, the Hāhaya princes.—

Kōkalla, ruler of **Chēdi**, had eighteen sons, of whom the eldest was ruler of **Tripuri**, while

⁶ *Archæol. Survey of India*, Vol. XVII. page 19

⁷ *Asiatic Researches*, Vol. XV. page 505 and 506. Some

of the inscriptions mentioned by Sir R. Jenkins have since then suffered in the most deplorable manner.

the others became lords of *maṇḍalas*. In the line of one of these younger sons was born—

(1.) **Kaliṅgarāja**, who conquered **Dakṣiṇakōśala**, and made **Tummāṇa** his capital. His son was—

(2.) **Kamalarāja**, who begat—

(3.) **Ratnarāja** (**Ratnēśa**), the founder of **Ratnapura**. He married **Nōṇallā**, the daughter of **Vajjūka**, chief of the **Kōmō maṇḍala**, who bore to him—

(4.) **Prithvīsa** (**Prithvīdēva**). This prince married **Rājallā**, from whom he had a son—

(5.) **Jājalla** (**Jājalladēva**). [Sāmvat 866 = A.D. 1114].

2.—The present **Rājīm** inscription, dated **Kulachuri-sāmvarsarē 896** = A.D. 1145, mentions in the order here shown:

(5.) **Jājalladēva** [Sāmvat 866 = A.D. 1114].

(6.) **Ratnadēva**.

(7.) **Prithvīdēva** [Kulachuri-sāmvat 896 = A.D. 1145].

3.—A **Malhār** inscription of **Jājalladēva**, dated **Sāmvat 919** = A.D. 1167-68, contains the following genealogy: The Moon—

(6.) **Ratnadēva**.

(7.) **Prithvīdēva** [Kulachuri-sāmvat 896 = A.D. 1145; and (according to *Archæol. Survey of India*, Vol. XVII. Plate XX.) **Kalachuri-sāmvarsara 910** = A.D. 1158-59].

(8.) **Jājalladēva**, described as ruler of the country **Tummāṇa**, [Sāmvat 919 = A.D. 1167-68].

4.—A **Ratnapur** inscription of **Prithvīdēva**, dated [Vikrama-Sāmvat 1247 (?) = A.D. 1190-91 (?), contains the following genealogy: The Moon—

(8.) **Jājalladēva** [Sāmvat 919 = A.D. 1167-68].

(9.) **Ratnadēva** [according to *Archæol. Survey of India*, Vol. XVII. page 43, line 4 from the bottom, and plate XX., **Chēdi-sāmvat 933** = A.D. 1181-82].

(10.) **Prithvīdēva** [Vikrama-Sāmvat 1247(?) = A.D. 1190-91 (?)].

This last inscription is the one edited by Dr. **Rājēndralal Mitra**, according to whose account it is dated in [Vikrama-Sāmvat 1297 = A.D. 1150-51. Accepting that date as correct,

Sir A. Cunningham³ has placed the inscription before the **Malhār** inscription of **Jājalladēva**, and has identified the three princes mentioned in it with the princes (5), (6), and (7) of the above list. But, in the first place, it is by no means certain that the figures on the stone (scratched on it rather than properly engraved, and perhaps added some time after the inscription itself was engraved⁴) are really 1207; on the contrary, on the rubbing before me the figures decidedly look more like 1247 than 1207. And secondly, it is perfectly certain that the inscription, which was written and engraved by the very persons, **Kamārapāla** and **Sāmpula**, who wrote and engraved the **Malhār** inscription, was composed by the *son*, **Dēvagaṇa**, of the man **Ratnasiṃha**, who composed the **Malhār** inscription, and that this **Dēvagaṇa** *had his father's composition before him*, when he composed his own inscription. Taking farther into consideration that the inscription enlogises five of the grandchildren of **Ratnasiṃha**, the composer of the **Malhār** inscription, and that moreover we have for a prince **Ratnadēva** the date **Chēdi-sāmvat 933** = A.D. 1181-82, which cannot possibly refer to the **Ratnadēva** (6) of the **Rājīm** and **Malhār** inscriptions, but must refer to a prince of that name who came after **Jājalladēva** (5), I feel convinced that the inscription has certainly been composed *after* **Chēdi-sāmvat 933** = A.D. 1181-82 = **Vikrama-sāmvat 1238**, and I think it probable that the figures at the end of it are really **Vikrama-sāmvat 1247** = A.D. 1190-91, and that these figures, by whom and whensoever added, furnish a true date for the last **Prithvīdēva** in the above list.

As regards the three rulers mentioned in the inscription here published, Nos. (5), (6), and (7) of the above list, nothing of any historical importance is mentioned of **Ratnadēva** and **Prithvīdēva**, in other inscriptions known to me. Regarding **Jājalladēva**, we are told in the **Ratnapur** inscription of **Sāmvat 866**, that he was allied (?) with the ruler of **Chēdi**, and on friendly terms with the rulers of **Kanyakubja** and of **Jējābhuktika**; that he captured in battle [but subsequently released?] one **Sōmēśvara**; and that the chiefs of the *maṇḍalas*... [**Dakṣiṇakōśala**, **Andhra**, **Khi-**

the word *saṃvat*, which precedes the figures 1247 (1), look certainly as if it had been put in the place of the figure 9, or as if the figure 9 had been altered so as to assume the form of *stam*.

³ *Archæol. Survey of India*, Vol. XVII. page 76.
⁴ A careful examination of the stone may possibly show that the inscription originally was dated in a year 1207. On a rubbing the first syllable of

miḍi [or Andhra-Khimidi], **Vairāgara**, **Lañjikā**, **Bhānāra**, **Talahāri**, **Dandakapura**, **Nandāvali** and **Kukkuṭa** annually paid tribute to him. The ruler of Chēdi here spoken of may have been either **Yasahkarna** or **Gayakarna**

of Tripurā; the ruler of Kanyakubja probably was **Gōvindachandra**,¹⁰ and the ruler of Jējābhuktika the Chandēlla **Kirtivarmadēva**.¹¹ Regarding **Sōmēśvara**,¹² I am unable at present to offer any conjecture.

TEXT.¹³

1. Ōm namō Nārāyaṇāya || Svasti | **Vaḍahara-dēsā**(śa)d=vinirgata-samadhigata-paṁcha - mahāsa(śa)bd - ābhinandita - suvarṇa-kala-ḍpar¹⁴ - indragōpaka-samkāsa(śa)-chchha[na]-nētra-chivar-ālaukṛita-patākā-chilua-saṁyukta[h]
2. **Paṁcha**[ha]¹⁵nsa-kul-ānuranjaka-śrī-[**Rāj**]jamāla-kul-āmala-tilaka-thakkura-śrī-**Sāhilla**-nāmāh || Yēna¹⁶ vai trasitā[h?]-[sū(sū)]rāh bhūmipālā mahā-raṇē | ādhipatyaṁ bhavōjyasya¹⁷ vivarabhūmī¹⁸in pā¹⁹
3. rjjitē || 1 || Tasy=ānujō bhavēd=blhrātā **Vāsudē**[vō]¹⁹ tath=āpi vā | **Bhāyilaṁ** cha bhavēt=putraṁ **Dēsalaṁ** ch=āri-marddanam || 2 || Tṛitīyaḥ **Svāmi**-nāmā cha ripavaḥ kshaya-kāriṇam | tē-hām **Bhaṭṭavilaṁ**²⁰dē-
4. sa(śa)m nītam vai pattanai[h*] saha²¹ || 3 || Punnai=navasa(śa)taḥ grāmāḥ shatpaṁchāsa(śa)[chchha?]-tāni cha | upārjjitam **Vihara**[-dē]sa(śa)m pauraḥhair=bhūja-vikramaiḥ || 4 || **Svāmi**-putrō mahā-vīrō **Jayadēvō**=pi nāma[ta]h[h*] pa-
5. [ncha]vinsa(mśa)sa(śa)tailḥ grāmāiḥ **Dāṇḍōraṁ** samupārjjitam || 5 || Tathā cha anujō²²putrō **Dēvasimham**=anūpamam | śarddha-saptasa(śa)tā yēna **Kōmō** nītam cha māṁḍalaṁ || 6 || Vikshyātā²³**Udayā** dēvi thakka[rā]jji mā-
6. hē[da]yā | satya-dharma-ratāḥ²⁴ sāt(śa)ntā svakul-ānanda-varddhanī || 7 || Ēbhīḥ putrō mahā-vā(ba)hō **Jagapālō**=pi nāmataḥ[h*] saṁgrām-ābhūmukhā yēna vimukhāḥ kshatriyā[h?] kṛitāḥ || 8 || **Māyurikā** mahā-[sū(sū)]-
7. rāḥ **Sāvantāḥ** maṇḍal-ēsva(śva)rā[h*] | bhavōjyasya²⁵pra[chaṇḍā?]-rē[h*][pa]rvva[t-ā]śrayaṇam gatāḥ || 9 || Dhanvinō=pi yathā Rāmō kshatriyaḥ-kula-marddanam | tath=āyam sa(śa)ra-saṁghātaiḥ nihanyēd=ripu-vāhini[m] || 10 || Asvā(śva)ruhō=
8. pi saṁgrāmō vāraṇā nara-vājinā²⁶ | gatās=tē prāmukhā[ja]²⁷sya siṁghēn=ēva yathā gajā[h*] || 11 || Nē[ng?]-jillai(?)=vvātha²⁸(?)charmuabhyām khadga-pāṇau²⁹r=mmah-āhavē | nihanyēt=Sa(śa)kra-saṁghātam vira[nētrā(?)]yathā raṇē || 12 ||
9. Śrī³⁰-**Jājalladēva**³¹-prabhu-rājya-kāryē **Jagapāla**-nāmā ripu-gandhabastī upārjjitā³²yēna(?)suvīra-[vri?]-tyai[h(?)]-sa[rā]hamāsatēramamāmanāla³³(?)-desam(śam) || 13 || Śrī-**Ratnadēva**³⁴-nripa-rājya-kalē [-s³⁵]ndūramā[h³⁶]as-**Talahāri**-bhū-

¹⁰ *ante*, Vol. XV, page 6. ¹¹ *ante*, Vol. XVI, page 202.

¹² Sōmēśvara, the father of the Chāluṁḍa Pūthvirāja who according to *Archaeol. Survey of India*, Vol. XXI, page 174, conquered Jējakabhukti in A.D. 1172 appears to have died in A.D. 1169 (*Jour. Beng. As. Soc.* Vol. LV, Part I, page 15) and could therefore hardly have been defeated by Jājalladēva before A.D. 1114.

¹³ From the rubbing.

¹⁴ Probably for *kalāś-parindragōpaka*.

¹⁵ This *akṣara* might possibly be read *in*.

¹⁶ Metre, Ślōka (Anuśrubbh), here and below, except where otherwise specified.

¹⁷ *v. e. bhavōjyasya*; the sign for *ja* is quite distinct, and it is the same as in *cepa*, line 9, and *cepa*, line 10.

¹⁸ There are many marks or scratches above and below *vivarabhū*, so that some of these *akṣaras* may have been altered; the *akṣara* given as *pa* may possibly be *u*, for below, lines 4, 9 and 10, the *u* of *upārjita* is denoted by the same or a very similar sign. I would suggest *vivara-bhūmī-upārjita*, though this would offend against the metre. ¹⁹ Possibly altered to *vō*.

²⁰ Possibly altered to *Bhaṭṭavilaṁ*.

²¹ This sign for *sa* may have been struck out already in the original.

²² This may have been altered to *anujō*.

²³ *v. e. vikshyātā*.

²⁴ This sign for *sa* may have been struck out already in the original.

²⁵ *v. e. bhavōjyasya*; see note 17 above.

²⁶ Probably intended for *mahābhūmī*.

²⁷ *v. e. prāmukhā*.

²⁸ These *akṣaras* are quite clear in the impressions; possibly *vvā* may be a mistake for *dhanā*. But I do not understand the beginning of the verse, nor the end of it.

²⁹ The *akṣara* in brackets has perhaps been altered to *pa*.

³⁰ This *Śrī* is perhaps preceded by a symbol for *śa*.

³¹ Metre, Upajāti, and of the following verse.

³² Or, perhaps, *upārjita*; the following *ph* is doubtful.

³³ All these *akṣaras* are perfectly clear in the rubbing, but I cannot make out the name intended.

³⁴ This sign for *sa* appears to have been struck out.

³⁵ Perhaps altered to *sa*.

³⁶ This may possibly be *u*; I cannot make out the name intended.

10. mau [i*] upârjjitau yēna savîra-vṛityaiḥ satyan=cha satyam **Jagasimha**-nāma³⁷
 || 14 || **Prithvidēva**-narēndrasya rājyē ch=aiv=ādhikam kṛitam |
 dṛugamē[shu] malā-durgam nītam **Saraharāgaḍha**[m] || 15 || Tath³⁸=āpi
Mavakāsiha[vā] cha durgam punaḥ
11. grihitam **Bhramaravadra**-dēsam(śam) | sva-vā(bā)hunā vikramam yēna sādhitam
Jagapāla-nāmā ripu-gandhahastī || 16 || **Kāntāram** **Kusumabhōgam**
Kāndāsē[hva(?)]ram=dēva cha | dēsam(śam) **Kākayaram** v=āpi nītam yēn=
 ā[tha] līlaya || 17 || Parōksha-
12. Rāmadēvasya Rāma-sō(śō)bhō=pi udvasam³⁹[i*]**Jagapālapuram** jātam kṛitē
 dēsē(śē) punar=ppavē || 18 || Kalau dharmmēshu Kauntēyō satyair=
 Jjīmūtavāhanam⁴⁰ | vikramēṇa yathā Rāmō danē Bhānusut-ōpamā⁴¹ || 19 ||
 Kshatrajñō⁴² sa-
13. tya-vaktā cha dvija-dēv-āgni-pūjakah[i*]purāṇ-āgama-sā(śi)strāṇām śrōtā vai bhārat
 ādibhiḥ || 20 || Rūmyaṇa-mukhāḥ sarvvē va[kt]ā jīva-[dha]rō=pi cha |
 manishī **Brahma**-vansē tu Bhāratī varadō=pi vā || 21 || Ī[drī][sa*?]-
14. [ś=cha ?] bhavēt=pumsō **Jagapālō**=pi sundara[h(?)] | Rāma-so(śō)bhah-sa[m]kāsā(śā)-
 [rtham(?)] prāsādām kārītamrimam⁴³ || 22 || **Sālmali**[ya]m nāma grāmam
 naivēdyāya nivēditam | [y]ē cha bhūpā bhavishyanti pālayishyanti
 sarvvadāḥ || 23 ||
15. S[th]āna-pati[r(?)]=yama-niyama-svādhyāya-ānyān-ānushāna-ratīḥ bhagavantaḥ
 śrī-Mutkātma⁴⁴nāmāḥ || tha⁴⁵ || **Jagapāl**-ānujō bhrātā **Gājālō**=pi dhanur-
 ddharām | vikramī dushta-hantā cha Sa(śa)kra-saṁgha-bhaya[ūka]rām || 24 ||
 Ta[tra(?)]
16. prishth-ānujō jā[ta]ḥ **Jaya**[t?]simhō=pi nāmataḥ [i*] Vibhatsasy=⁴⁶ōpamam
 vī[ra]m dhanvinam ripu-nāsa(śa)nām || 25 || Pradhanam trīshu⁴⁷ rā[jy]ē-hu⁴⁸
Dēvarājō=pi nāmataḥ[i*] ebhis=tu paksha-samyōgaiḥ sādhitān=cha
 vasundharām || 26 ||
17. Iti Ayōdhyāpurīy-ānvayē mahāmāhēsya(śva)ra-paramavaishṇavya-mahāpam[ā]lita-
 thakkura-śrī-Jasōdhara-putrēṇa dvija-dēva-guru-su(śu)śrūsh-ābhīratēna manīṣiṇā
 bhakti-bha[rtr]ānuranjakēna⁴⁹ maha-
18. t-kavi-kiṁkīrēṇa⁵⁰ lakshaṇēna vinā⁵¹thakkura-śrī-Jasānaudēna kṛitā prasa(śa)sti[h][i*]
 Likhitā [ch=ē]yam rūpakāra-śrī-Ratnapūlēna utkīrṇṇ=āpi vā || **K[u]lachuri**-
 samvatsar[ē] 896 Māghē māsi su(su)kla-
19. pakshē rath-āshṭamyām [V]u(bu)dha-dinē likhitā iti || ⁵² ||

³⁷ This sign for *anusastra* may have been struck out

³⁸ Metre, Upendravajrā.

³⁹ These three *aksharas* are quite plain: I should have expected some such word as *udvāhat*

⁴⁰ Perhaps altered to *śāhanah*.

⁴¹ *ie. saptaṁ*

⁴² Instead of this, I should have expected *h. itajjoh*

⁴³ This is intended for, and seems to have been altered to, *h. itajjoh*

⁴⁴ *ie. Mahānāma*

⁴⁵ The same sign for *tha* occurs occasionally at the end of chapters or whole works in Devanagari MSS., in place of the more common sign resembling *cha*. Both may originally have been intended as symbols for *om*. See the symbol for *om* used similarly *eg.* in lines 72 and 73 of the Kantham plates of Vikramaditya V, *ante*. Vol. XVI, page 23.

⁴⁶ *ie. Bhānusut-ōpamā* of Arjuna.

⁴⁷ *ie. trīshu*

⁴⁸ This may be *śishir-śhu*.

⁴⁹ *ie. either bhārta-bhakti, or bhārta-anuranjakēna*.

⁵⁰ *ie. mahākavi-kiṁkīrēna*.

⁵¹ The words *lakshaṇa vinā* are perfectly plain in the rubbings: I am unable to explain them.

⁵² Between these stops there is a small drawing, the nature of which may be seen from the lithograph on Plate XX. of *Archæol. Survey of India*, Vol. XVII. Its middle portion may originally have been intended as a symbol for *om*, but the whole appears to be merely an ornamental full stop. A somewhat similar drawing we find at the end of the unpublished Jabalpur Chedi inscription of the year 926; and in lines 14 and 26 (exactly where we should expect to find full stops), and at the end of the inscription of Alhanadevi, of the year 907 — A.D. 1155, a photolithograph of which is published in *Archæol. Survey of Western India*, No. X, page 107. And that this sign is not confined to Chedi inscriptions, is shown by the fact that it occurs also *etc.* at the end of the Yādava inscription of Śaka-Samvat 1063 — A.D. 1141, a photolithograph of which is published *ante*, Vol. XII, page 126, and the writing of which also in other respects shows a very remarkable resemblance to that of Alhanadevi's inscription.

MISCELLANEA.

CALCULATIONS OF HINDU DATES.

No. 8.

In this Journal, Vol. XVI. p. 109 ff., I have already referred to the date in the *Ḥaidarābād* copper-plate grant of the Western Chalukya king Pulikēsin II, in which the details for calculation are—Śaka-Samvat 534 expired, the month Bhādrapada (ordinarily August-September), the new-moon *tithi*, and an eclipse of the sun. And on that occasion I arrived at the conclusion that the solar eclipse in question is that of the 23rd July, A.D. 613.

This result, however, was in consequence of a mistake as to the English equivalent of the indicated current Śaka year, due to the manner in which the Tables¹ are arranged for expired years without any distinct intimation to that effect, and by no means confined to myself. As regards the record in question, Śaka-Samvat 534 expired, and 535 current, is really equivalent to A.D. 612-613. In this period, there was an eclipse of the sun² on the 2nd August, A.D. 612; which was the new-moon *tithi* of Bhādrapada according to the *Pūrṇimānta* northern arrangement of the lunar fortnights.³

Mr. Sh. B. Dikshit finds, however, by the *Sūrya-Siddhānta*, that the given *tithi* ended at 35 *ghaṭis*, 46 *palas*, after mean sunrise, i.e. about 2 hours, 18 minutes, after mean sunset, at Bādāmi,—the locality to which the record refers itself; and, consequently, that this eclipse, occurring in the night, was not visible in India.

Accordingly, it is doubtful whether the record really refers to the eclipse of the 2nd August, A.D. 612; or whether we have here a genuine instance of a mistake in the year that is quoted, and the eclipse that is really intended is that which occurred, fully visibly at Bādāmi under very impressive circumstances,⁴ on the 23rd July, A.D. 613, which date again, as shewn by me on the previous occasion, answers to the new-moon *tithi* of the natural Bhādrapada according to the

Pūrṇimānta northern arrangement of the lunar fortnights. This question must be settled when we can determine for certain whether invisible eclipses were, or were not, to be occasions of ceremonies and public acts.

But the point to which I have now to draw attention, is, that, whichever of these two eclipses we select as the one intended, this record proves that, up to A.D. 612 or 613, and even in a particular part of Southern India, very far south of the river Narmadā, the *Pūrṇimānta* northern arrangement of the lunar fortnights was used in connection with the years of the Śaka era.

No. 9.

In a copper-plate grant of the Rāshtrakūṭa king Gōvinda III., from the Kanarese Country, the date (*ante*, Vol. XI. p. 126. line 1ff. and Plate) is—Śaka-nripa-kāl-ātita-samvatsarangal-ē-nūṛ=irpatt-āraṇṇyā Subhānu embā varshadā Vaisākha-māsa-kṛishṇa-paksha-pañchamī-Bṛihaspativāram āgi.—“when it is Thursday, the fifth *tithi* of the dark fortnight of the month Vaisākha (ordinarily April-May) of the year called Subhānu, which is the seven hundred and twenty-sixth (*af*) the years that have gone by from the time of the Śaka king.”

Whether by the literal meaning of the text the given year, Śaka-Samvat 726, is indicated as current, or as expired, is not quite certain.⁵ But correct results can be obtained only by taking it as an expired year.

Thus, by the Southern System of the Sixty-Year Cycle of Jupiter, the Subhānu samvatsara coincided with Śaka-Samvat 726 current. But, with the basis of Śaka-Samvat 725 expired, I find, from Prof. K. L. Chhatre's Tables, that Vaisākha kṛishṇa 5 of Śaka-Samvat 726 current, ended, by the *Amānta* southern arrangement of the lunar fortnights, on Saturday, the 15th April, A.D. 893, at about 58 *ghaṭis*, 38 *palas*, after mean sunrise at Bombay; and, by the *Pūrṇimānta*

¹ e.g. those of Gen. Sir A. Cunningham's *Indian Eras*, and Mr. Cowasjee Patell's *Chronology*.—It is, under any circumstances, quite illogical to speak of, for instance, “Chaitra śukla 1 of, in, or belonging to, Śaka-Samvat 500,” when the Śaka year is intended as an expired year. And it is particularly necessary to use the current Hindu years, when the object is to compare them with years of the Christian era, of which the current years are always quoted: leaving it to any one who has to calculate a date by Hindu Tables, to take the preceding expired year as the basis of the calculation. Owing to the customary arrangement of the Tables, there has been a general understanding that the epoch of the Śaka era is A.D. 78-79. And Dr. Burnell even went so far as to write explicitly (*South-Indian Pictography*, p. 72, not 6) “the rough equation for converting this era into the Christian date is + 78½. The beginning of the year

being at the March equinox; if the Śaka *āntika* (or expired) year be mentioned, the equation is + 79½.—But the true epoch or year 0 of the Śaka era is A.D. 77-78 and A.D. 78-79, was its commencement or first current year, see a “Note on the Epoch and Reckoning of the Śaka Era, which will appear shortly in this Journal.” We have to add only 77-78, to convert current Śaka years into current Christian years; and, by adding 78-79, what we obtain is the current Christian year equivalent to a given expired Śaka year.

² See *Indian Eras*, p. 210.

³ See the Table, *ante*, Vol. XVI. p. 113.

⁴ See the details given on the previous occasion.

⁵ See my remarks at page 117 above on the use of *āntika* in the compound *śakā-parā-kāl-ātita-samvatsaraṅga*.

northern arrangement, on Friday, the 17th March, at about 28 *ghatis*, 2 *palas*.

With the basis, however, of Śaka-Samvat 726 expired, the given *tithi*, Vaisākha kṛishṇa 5 of Śaka-Samvat 727 current, ended, by the *Amānta* southern arrangement, on Friday, the 3rd May, A. D. 804, at about 49 *ghatis*, 37 *palas*; but, by the *Pārnimānta* northern arrangement, on Thursday, the 4th April, A.D. 804, at about 15 *ghatis*, 45 *palas*.

And this result is in perfect agreement with the name of the given *samvatsara*, Subhānu. For, though by the Southern System of the Cycle, if it had really been started at that time, the Subhānu *samvatsara* had expired before the resulting English date, yet, from some Tables drawn up by Mr. Sh. B. Dikshit, I find that according to the so-called Northern System, and the only really astronomical system, of the Cycle, the Subhānu *samvatsara* commenced on the 17th June, A.D. 803, which is in due accordance with the result from Varāhamihira's rule in the *Brīhat-Samhitā*, viii. 20, 21, that this *samvatsara* was current at the end of Śaka-Samvat 726 expired, i.e. at the commencement of 727 current: and was followed by the Tārara *samvatsara* on the 12th June, A.D. 804. Therefore, the Subhānu *samvatsara* was current on the given date, as recorded.

Accordingly, this record proves—(1) that, at any rate up to A.D. 804, even as far down in Southern India as the banks of the river Tungabhadra, to which locality the record refers itself, the Pārnimānta northern arrangement of the lunar fortnights was still used in connection with the years of the Śaka era;—and (2) that, up to the same date, and in the same part of the country, it is the Northern System of the Sixty-Year Cycle of Jupiter that was in use, at any rate, in connection with the years of the Śaka era.

No. 10.

In the Sirūr stone inscription of the Rāshtrakūta king Amoghavarsha I., from the Dharwad District, the date *ante*, Vol. XII. p. 212, line 15th is—Śaka-uripa-kūlātita-samvatsaraṅgalā-ma-nbhātta-entameya Vyayam emba samvatsaram pravartise Śrīmaḥ-Amoghavarsha-Nripātunga-nāma-akṛitena vijaya-rājya-pravardhana-śaka-samvatsaraṅgalayatt-enaḍḍim uttar-ottaram rājya-ābhaviddhi sabhuttire Jyēṣṭha-māsē-āmaṣeyyam Ādityavāram āgesūrya-ṛghatāḥ andu,—“when the samvatsara named

Vyaya is current, which is the seven hundred and eighty-eighth (of) the years that have gone by from the time of the Śaka king; (and) while there is current, with perpetual increase of sovereignty, the augmenting year fifty-two of the victorious reign of him who is marked with the glorious name of Amoghavarsha-Nripātunga; when it is the new-moon *tithi*, and Sunday, of the month Jyēṣṭha (ordinarily May-June); at the time of an eclipse of the sun.”

Here again, whether by the literal meaning of the text the given year, Śaka-Samvat 788, is quoted as current, or as expired, is not quite certain. But correct results can be obtained only by taking it as an expired year. Thus, in Śaka-Samvat 788 current (A.D. 865-66), there was no eclipse of the sun, on the given *tithi*. Also by the Southern System of the Cycle, the Vyaya *samvatsara* coincided with Śaka-Samvat 789 current (A.D. 866-67). And, by the Northern System, it commenced in Śaka-Samvat 788 current, on the 23rd September, A.D. 865, and was followed by the Sarvajit *samvatsara* in Śaka-Samvat 789 current, on the 20th September, A.D. 866; and thus, as will be seen, by either system it was current on the given date, the English equivalent of which is the 16th June, A.D. 866.

With the basis of Śaka-Samvat 788 expired, the given *tithi*, Jyēṣṭha kṛishṇa 15, belonging to Śaka-Samvat 789 current, ended, by the *Pārnimānta* northern arrangement of the lunar fortnights, at about 1 *ghati*, 49 *palas*, on Saturday, the 18th May, A. D. 866, when there was no eclipse of the sun; but, by the *Amānta* southern arrangement, at about 20 *gh.* 5 *p.* on Sunday, the 16th June, A. D. 866, when there was an eclipse of the sun,¹ which, as the *tithi* ended at about 22 P.M. (for Bombay), might be visible in India.

Accordingly this record proves that, by A.D. 866, the Amānta southern arrangement of the lunar fortnights had been applied to the years of the Śaka era, in Southern India, or at any rate in the particular part of the country to which this inscription belongs. And a comparison of the results for the grant of Śaka-Samvat 727 current, No. 9 above, shews that this change in the calendar was made between A. D. 804 and 866.

As the Subhānu *samvatsara* was current on the given *tithi* according to both the Northern and the Southern Systems of the Cycle, this record

¹ Sukli; though the latter is the initial day that is required for the notation of *tithi*.

² See *Indian Eras*, p. 212.

³ From the use of Mr. Sh. B. Dikshit's Tables, I find that for the purposes of such rules as that of Varāhamihira, the 52 years have to be treated as commencing with the *Māsa Śarāṅgana*, and not with Chaitra

furnishes no evidence in that direction. But my impression is that further inquiries will shew that the Southern System of the Cycle is always coupled with the *Amānta* arrangement of the lunar fortnights; and the Northern System, with the *Pārgimānta* arrangement.

J. F. FLEET.

THE ACACIA OF PERSIA AND ARABIA.

Referring to note 797, Vol. IV. *Indian Notes and Queries*, regarding the magical properties of the *Acacia*:—when travelling in Southern Persia (between Kermān and Bender 'Abbās) in 1879, I frequently had occasion to hear that the *keret*, a kind of *acacia* with dark leaves, was an unlucky tree. People who go to sleep under it are said to fall ill, or, according to some, will never wake up again. Another *acacia* with lighter coloured foliage and growing in the same neighbourhood, is called *kāhūr*, and considered healthy and lucky.

The medical dictionary *Makhzan-al-adviyeh*, s. v. *qarṣ* (Arabic: *keret* (Persian) says: "It is a fruit like that of the *umm-i-gheilān*, whose juice is called *aqāqiā*, and is the gum arabic of commerce; the tree yielding the *qarṣ* is a thorn and some say that its leaves are the *salam* and its fruit the *ṣant*, its wood is hard, and when old gets black like ebony, with whitish marks.¹ The people of India and Bengal use it for joinery. Its seed is like that of tamarinds, but smaller and green, getting red when ripe. Its flowers are white or yellow and sweet-scented. Its leaves and seed are used for tanning leather and are called *jelūd-al-qarṣ* (bark of *qarṣ*).” The *Burhān-i-qatā'* describes the *qarṣ* as a fruit resembling the Syrian *kharṭūt* (a large kind of mulberry), but whiter and more insipid.

Aqāqiā, from the Greek *'akakia*, is according to the *Makhzan*, the juice of the *qarṣ*, the fruit of the *ṣant* tree, and the gum arabic of commerce. The *aqāqiā* collected from the unripe fruit is red before drying and greenish after drying; that which is collected from the ripe fruit is blackish green and better than the other, also harder and heavier. The best way to obtain the gum is to collect the pods when ripe and to pound them into a mass, which is to be put over a gentle fire till coagulation sets in, when it is to be poured into forms and dried. Many people mix the juice of the leaves with that of the fruit and prefer to let the mass coagulate by the heat of the sun.²

Umm-i-gheilān, generally *magheilān* in Persian, is the name of the tree which yields the gum arabic, it is the old *spina aegyptiaca*, a kind of *acacia*, probably the same as the *ṣant*.

Sant, also called *sunt*, the *shittah* of Scripture, originally *santah*, from Egyptian *shonte* or *shonti* (Gesenius), old *spina aegyptiaca*, *minosa* or *acacia nilotica*, *acacia vera*, giving the gum arabic; it abounds in Egypt, Arabia and Syria. Its wood is very hard and almost imperishable and gets black, like ebony, with age; its fruit is the arabic *qarṣ*, hence *Bilād-al-qarṣ*, the *qarṣ* country, Arabia Felix, from the number of trees growing there, the Persian *keret*. Other *Acacias* yielding gum arabic are *acacia serissa* of Egypt and *acacia veyal* of Egypt and Sinai.

A. HOUTUM-SCHINDLER.

Tehran.

A NOTICE OF THE CHEHAR MAQALEH.

The *Chehār Maqāleh* (چهار مقاله) of Ahmed bin 'Umer bin 'Alī u'd-Nizāmi ul'Arūzi us-Samarqandī has just been published in lithograph at Tehrān: the colophon bearing A. H. 1305 as the date of publication. This work owes its title to its division into four *maqālehs*, or chapters. Four classes of men: *munshīs* (*dabīr*), poets, astrologers and physicians being indispensable to the well-being of a state, Nizāmi-ul'Arūzi wrote the present work, containing anecdotes of the most famous in each class, who preceded him, or who were contemporary with him. This work is much quoted by biographers of the early poets and philosophers. In it is the story of 'Umer Khayyām, in which he foretells that flowers shall be strewn over his last resting-place. Nizāmi-ul'Arūzi met Khayyām in A. H. 506 at Balkh, and there heard him say that his tomb would be in a place where annually two falls of flowers would be strewn on his grave. In A. H. 539 Nizāmi-ul'Arūzi passed through Nishāpūr and asked to be shown the resting-place of the great *rubā'i* writer, whom he looked on as his master; and he was shown a place in the grave-yard by a wall, over which, from a neighbouring garden, a couple of fruit trees shed their blossoms, completely hiding the poet's last abode. Nizāmi-ul'Arūzi mentions A. H. 547, after this passage, as a year already past.

One of the earliest notices of this author and poet will be found in the very rare *Lubāb-ul-Albāb* of Muḥammed 'Arifi,³ and therein is he placed amongst the poets of Māverā-un-nehr who panegyrised the Seljūqs. He was a panegyrist of the Gūrī Amīrs, of whom he mentions more particularly 'Alā-ud-Dīn Abū 'Alī ul-Husain Bul-Husain, in whose service and in that of his predecessors he had spent forty-five years. He is said to have travelled much, and to have been well

¹ cf. *Phay.* xii. 19.

² cf. *Phay.* xxiv. 67.

³ Sprenger, *Orde Catalogue*, p. 4, No. 56

skilled both in Astrology and Medicine. In poetry he was the disciple of Amīr Mu'izzī. Dolet Shāh, in his *Tuzkereh* mentions the *Chehār Maqāleh*; and adds that the poet also composed a metrical version of the romance of *Vais u Ramīn*. Ḥamdu'llah Mustōfi in his *Tārikh Engīdeh* (apparently copied in the *Ḥabīb-us-Siyar*, Vol. II Juz. 4) mentions a *Majma'un-Nevāder* as also by him. In the *Haft Iqlīm* in the description of Samargand, it is stated that he composed two prose works: the present work and the *Majma'un-Nevāder*. Hāji Khalīfeh (Vol. II. p. 656) mentions the *Chehār Maqāleh*, and in Vol. V. p. 405 also mentions the *Majma'un-Nevāder*. In this second notice he calls the author Nizām-u'd-Dīn Abū'l-Ḥasan Ahmed bin 'Umer bin 'Alī ul-Mekki ul-'Arūzi us-Samargandī. The *Shum'Anjuman* (p. 451) mentions both works. In the preface to the *Majma'ul-Fusehā* of Rezā Qulī Khān, the *Majma'un-Nevāder* is mentioned as one of the sources of that work. A notice of the poet will be found in the *Majma' ul-Fusehā*, Vol. I. p. 635. The *Atash-kedeh* also contains a notice of the author of the *Chehār Maqāleh*.

S. J. A. C.

THE BOOK OF THE FALCON.

Timūr Mirzā, the author of the work called the *باز نامه* Bāz Nāmeḥ, is better known to

English readers as one of those concerned in the attempt to place his father, Ḥusain 'Alī Mirzā, Firmān-Firmā, on the throne of Persia in succession to Fatḥ 'Alī Shāh. The attempt proving unsuccessful, Timūr Mirzā and his five brothers fled from Fārs to Baghdād, and subsequently went on to Europe and England. One of the Princes, Najef Qulī Mirzā, wrote an interesting account of the events which followed the death of their grandfather, Fath 'Alī Shāh, and of their adventures in consequence. This work was translated into English, and printed in London by W. Tyler (undated), for private circulation only, in 2 volumes, under the Title: "Journal of a Residence in England of their Royal Highnesses Reeza Koollee Meerza, Najaf Koollee Meerza, of Persia; to which are prefixed some particulars respecting modern Persia and the death of the late Shah."

Timūr Mirzā, after thirty years' exile at Baghdād, returned to Persia. Being a great sportsman he was in constant attendance at the shooting excursions of Nāsir-u'd-Dīn Shāh, the present ruler of Persia. No one knew better than he how to train and keep the different varieties of hawks used by the Persians in their hunting expeditions. The present treatise was written in A.H. 1285, and has been lithographed at Tehrān undated. Its author died on the 13th Rabi II, A.H. 1291.

S. J. A. C.

BOOK NOTICE.

ASIATIC RESEARCHES.—Popular Edition, Vol. II. Reprinted by BROJENDRO LALL DOSS, Calcutta, 1885-7, Royal 8vo., pp. 398.

We noticed the first volume of this convenient reprint *ante*, Vol. XV. p. 216, and expressed a hope, which we are sorry has not been fulfilled, that the numbers would be issued more frequently. Volume II., of which the first number was issued in September 1885, was only completed in January 1888. At this slow rate of progress the reprint is not likely to be of much use, nor will subsequent volumes find many subscribers. We trust the publishers will be able to expedite the issue of the rest of this reprint of a valuable and rather rare series of volumes. In the present handy and cheap form the work ought to be welcome to many persons, but its value is seriously injured by delays which will spread the reprint over a quarter of a century. The letterpress of Vol. II. appears equal to that of the first volume, and faultless in every respect. The Tables which form pp. 157 and 158 in the original edition, have, however, been treated in a very clumsy manner. Although their reduction from the original size to

the reduced scale of the reprint would have presented no difficulty of any sort, they have been reproduced in the same size as in the original; the result is cumbersome and unwieldy, and the entire volume is disfigured. The volume begins with the Fourth, Fifth and Sixth Anniversary Discourses delivered by the President in February 1787, 1788 and 1789; and includes papers read before and communications made to the Asiatic Society in Bengal, the earliest of which is dated 3rd March 1784, and the latest February 1790. The article numbered V (pp. 62-85), in which the President, Sir William Jones, describes his visit (on his way to India in 1783) to the "Island of Hinzuān or Johanna," one of the Comoro islands, is not a little curious. Davis's article, dated 15th February 1789, "On the Astronomical computation of the Hindus" (pp. 175 to 226), is still, we believe, worthy of study. An article of general interest is No. XVII., "an account of the Kingdom of Nēpāl," written by the Capuchin Father Joseph, Prefect of the Catholic Mission in that country, in which he resided several years about the middle of the last century.

METHODS AND TABLES FOR VERIFYING HINDU DATES, TITHIS, ECLIPSES, NAKSHATRAS, ETC.

BY HERMANN JACOBI, PH.D.: PROFESSOR OF SANSKRIT IN THE UNIVERSITY OF KIEL.

THE Tables¹ which are now placed before the public, are intended for the use of those who wish to verify dates of Indian documents, inscriptions, manuscripts, etc., chronicled according to the intricate Luni-Solar Calendar of the Hindus. The working of these Tables will be found easy, requiring only the computation of a few figures; and the operation to be gone through is almost mechanical, and will yield correct results, if the rules, to be explained in the sequel, be strictly adhered to. Nevertheless, to render more intelligible the process of calculation, it will be well to place before the reader the frame and outlines of the Luni-Solar Calendar.

PART I.—ON THE LUNI-SOLAR CALENDAR.

On the Lunar Months, Pakshas, and Tithis in general.

A lunar month is the time of one lunation. It consists of two *pakshas*, or fortnights,—the bright (*śukla*, *śuddha*) fortnight, or the time of the waxing moon; and the dark (*kṛishṇa*, *bahula*) fortnight, or the time of the waning moon. In the North, the dark fortnight precedes the bright fortnight; in the South, it follows it. But the bright fortnight is always the same, both in the South and the North of India.² The lunar month takes the name of that solar month, in which occurs the true new-moon forming the commencement of the bright fortnight of the lunar month under consideration. The new-moon (the first if there are two) in solar Chaitra, (or Kārttika for some eras) forms the beginning of the luni-solar year. Each *paksha* is divided into 15 *tithis*. A *tithi* is the time required by the combined motions of the sun and moon to increase (in the bright fortnight) or to diminish (in the dark fortnight) their

relative distance by twelve degrees of the zodiac. The names of the *tithis* are the Sanskrit ordinals.—*prathamā*, *dvitīyā*, etc. The first *tithi* of either *paksha* is also called *pratipad* or *pratipadā*: the last *tithi* of the bright fortnight is also called *pūrṇimā*, as it ends with the moment of full-moon; and the last *tithi* of the dark fortnight, *amāvāsī*, as it ends with the moment of new-moon. The *tithis* furnish the names of the *civil* days, inasmuch as the civil day (being accounted to begin with true sunrise) is named after the *tithi* that ends in it. Thus, *Māghē ba di 9* is the usual abbreviation equivalent to “the civil day in which ended the 9th *tithi* of the dark fortnight of the lunar month Māgha.”

On Mean and True Lunar Months and Tithis.

The sun and the moon do not move with an even motion; *i.e.* they do not always move in the same time through the same space of the firmament. Yet, for the sake of calculation, it has been found convenient by astronomers to assume that the motion of all the heavenly bodies is proportional to time. This motion is called the *mean* motion, to distinguish it from the *true* motion.

The place in which the sun or moon would be, if they had the *mean* motion, is called their *mean* place. In the same way, *mean* lunations and *mean tithis* are spoken of. But, in the Hindu Calendar, only *true* lunations and *true tithis* are used; *i.e.* *true*, not as would be found by actual observation, but as calculated according to the astronomical theory of the *Siddhāntas*. A *mean* lunation, or lunar month, is about 29 days, 13 hours; while the *true* lunar month varies in length between 29 days, 40 minutes, and 30 days, 1 hour, 15 minutes. The duration of a *mean tithi* is about 23 hours, 37 minutes; that of a *true tithi* varies between about 20 and 26 hours. It is very easy to

¹ Tables 5 to 11 are constructed on the plan of those of Largeteau, first published in the “*Connaissance des temps*” for 1846. By the Tables of Largeteau, the true place of the moon in relation to the sun can be found with a high degree of accuracy according to the lunar and solar theories of modern astronomy. In order to make the Tables of Largeteau serve our purpose, a part only of them could be used. The rest had to be altered

according to the elements and theory of the *Siddhāntas* as will be explained at the end of this paper. I have to thank Dr. Peters, Professor of Astronomy in Kiel, now in Königsberg, with whose kind assistance I have come to a thorough understanding of the construction of Largeteau's Tables.

² Compare the scheme, *ante*, Vol. XVI. p. 143.

calculate a *mean* date; but it is of course more difficult to find the *true* one.

On Intercalary and Expunged Months.

It sometimes happens that *two* new-moons occur in one solar month: all solar months being longer than 29 days, 40 minutes; some by more than one or two days; some by a fraction of a day only. In that case there will be, accordingly, two lunar months of the same name: of these two months the first is considered as the intercalated (*adhika*) month of that name, the second as the proper one (*viya*); or, in Northern India, the *adhika* month is inserted between the two *pakshas* of the *viya* month.

On the contrary, occasionally there occurs *no* new-moon within one solar month: in that case, the lunar month, synonymous with the solar month in question, is altogether omitted (*kshaya*); or else, according to Warren, the name of that month is compounded with that of the following one.

Example.—If new-moon occurs on, or between the limits of, the first and last days of the solar Kārttika, there will be two lunar months Kārttika; the first of which is *adhika* Kārttika, the second *viya*. On the contrary, if no new-moon occurs in the solar Pausha, there will be no lunar Pausha in that year; Pausha being in that case an expunged or *kshaya* month.

On Repeated and Expunged Tithis.

If two *tithis* end on the same civil day, that *tithi* which both begins and ends on that same day, is accounted to be expunged (*kshaya*); that is to say, though in the strict lunar reckoning the *kshaya tithi* is extant, yet in the *civil* reckoning, which is the only one used for dating, it is neglected. For instance, if, of the *tithis* 11, 12, 13, the 12th ends on the same day with the 11th, that day is called the 11th according to the usual rule; but the following day is called the 13th; the 12th *tithi* being expunged, and there being no day to take the number of it. If, on the other hand, a *tithi* begins on one day runs over the next, and ends on the next but one, that day on which no *tithi* ends, takes the same number as the preceding day, which is thus repeated

(*adhika*). For instance, if the 12th *tithi* began on one day and ended on the next but one, the corresponding days will be numbered 11, 12, *adhika* 12, 13.

It will be obvious that we cannot speak of repeated and expunged *tithis*, unless we understand by *tithi* the civil day corresponding to a *tithi*. Nor of repeated and expunged *days*, unless we mean by it the number given to the day by the *tithi*. Intercalation or expunction does not affect the week-days, which run on continuously uninterrupted.

On Solar Months.

From the preceding definitions, it will be evident that, in order to convert a luni-solar date into one of the English calendar, we must ascertain:—

- (1) The space of time corresponding to the eponym solar month:—
- (2) The day on which the new-moon occurred within that space of time;—
- (3) The day on which ended that *tithi* after which the day given in the Hindu date is named.

The last two questions can be accurately answered with the help of Tables 5 to 11; the first approximately only. But, in most cases, an approximate answer to the two first questions will be sufficient. Only where it is doubtful whether there was an intercalary month,—*i.e.* when the new-moon falls on the approximate initial day of the solar month indicated by our lunar Tables,—the exact limits of that solar month should be ascertained by Tables 1 to 4.² To ascertain the exact time of the solar months, four Tables are wanted, one for each of the four years of our intercalary cycle: which Table applies, is shown by the superscription of those Tables. They give, under the name of each solar month, the year A.D. in which the initial date of that month advanced by one day. The corresponding English date will be found by adding, to the date written immediately below the name of the solar month, the number of days found in the first (or last) column on the same horizontal line with the year in question. Thus, we find, *e.g.*, by Table 2, that in A.D. 574 the solar Varāsha began on the 20th March (Old Style). The 20th

² These Tables give the same result as Warren's Tables I, III, and V. They are based on the *Arghya-tak* list.

March continued to be the initial day of Vaisākha till A.D. 690, for all years which, divided by four, leave as a remainder 2. The day thus found is, however, the *civil* beginning of the solar month, the day on which the astronomical beginning of the month, *i.e.* the *Saṁkrānti*, or entrance of the sun into a zodiacal sign, is usually celebrated. The *true instant* of the beginning of a solar month occurred, in any year entered in the Table, at or shortly after sunset of the day *pre-ceding* the civil beginning of the solar month of that year; every four years it advances by 50 minutes. For example, the solar Vaisākha in A.D. 574 began astronomically on the 19th March at sunset in Laṅkā, or 12 hours Laṅkā time; and in A.D. 622, which year is separated from 574 by 48 (*i.e.* 12×4 years). 12×50 minutes = 10 hours later, *i.e.* on the 19th March, 22 hours, Laṅkā time. The moment thus found is some minutes later than the true one, but this degree of accuracy will be found sufficient. The astronomical limits of the solar month are wanted for determining the name of the lunar months in cases where the true new-moon occurs near those limits. The initial days of the solar months are also the days of *saṁkrānti*; 1st Vaisākha, that of Mēsha; 1st Jyāishṭha, that of Viṣabha; and so on (see at the foot of Table 7). The 1st Māgha is the first day of the *utārāyana*, or the period during which the sun is moving from south to north; and the 1st Śrāvaṇa, that of the *dakṣiṇāyana*, or the

period during which the sun is moving from north to south.

PART II.—USE OF THE TABLES.

Description and Explanation of the Tables.

In Tables 5 to 8, the value of four quantities, *a, b, c, d*, for different periods is given: *e.g.* in Table 5 we find that in A.D. 1801 (on the 1st January) $a = 5138$, $b = 566$, $c = 6$, $d = 479$. For calculating *tithis*, however, only *a, b, c* are wanted; and we shall therefore, for the present, speak of *a, b, c* only.

The quantity *a* (plus the constant quantity 200)* gives the *mean* lunations expressed in 10,000th parts of the unit; or the difference of the mean longitudes of the sun and the moon expressed in 10,000th parts of the circle. And the value $a = 5138$ denotes that, at the moment in question, 0.5138 of the current *mean* lunation was gone.

b and *c* give, in thousandth parts of the unit, two other quantities on which depends the difference of the *true* longitudes of the sun and moon,[†] which we shall denote by *A*. With *b* and *c* turn to Tables 9 and 10; there, for the value of *b* and *c* as arguments, is given the equation which, added to *a*, gives *A*; *e.g.* for *b*. 566, we find by Table 9, as equation, 84; for *c*. 6 we find, by Table 10, as equation, 58. Adding 84 and 58 to $a = 5138$, we get $A = 5280$. The value of *A* shows which *tithi* was current at the moment under consideration, as presented in the following table:—

| Śukla-pakṣa. | | | |
|------------------------------|--------|------|--|
| 1 Tithi; <i>A</i> is between | 1 & | 333 | |
| 2 " " " | 334 " | 666 | |
| 3 " " " | 667 " | 1000 | |
| 4 " " " | 1001 " | 1333 | |
| 5 " " " | 1334 " | 1666 | |
| 6 " " " | 1667 " | 2000 | |
| 7 " " " | 2001 " | 2333 | |
| 8 " " " | 2334 " | 2666 | |
| 9 " " " | 2667 " | 3000 | |
| 10 " " " | 3001 " | 3333 | |
| 11 " " " | 3334 " | 3666 | |
| 12 " " " | 3667 " | 4000 | |
| 13 " " " | 4001 " | 4333 | |
| 14 " " " | 4334 " | 4666 | |
| 15 " " " | 4667 " | 5000 | |

Full-moon; *A* = 5000

| Kṛishṇa-pakṣa. | | | |
|------------------------------|--------|------------|--|
| 1 Tithi; <i>A</i> is between | 5001 & | 5333 | |
| 2 " " " | 5334 " | 5666 | |
| 3 " " " | 5667 " | 6000 | |
| 4 " " " | 6001 " | 6333 | |
| 5 " " " | 6334 " | 6666 | |
| 6 " " " | 6667 " | 7000 | |
| 7 " " " | 7001 " | 7333 | |
| 8 " " " | 7334 " | 7666 | |
| 9 " " " | 7667 " | 8000 | |
| 10 " " " | 8001 " | 8333 | |
| 11 " " " | 8334 " | 8666 | |
| 12 " " " | 8667 " | 9000 | |
| 13 " " " | 9001 " | 9333 | |
| 14 " " " | 9334 " | 9666 | |
| 15 " " " | 9667 " | 10000 or 0 | |

New-moon; *A* = 0 or 10000

* 200.5 has been subtracted from the exact value of the *mean* lunation in order that all corrections to be applied to it for finding the value of the *true* lunation shall be *subtractive* quantities, and not additive in one case, and

subtractive in another.

[†] *b* is the mean anomaly of the moon; and *c* the mean anomaly of the sun.

$A. = 5280$ denotes, therefore, that, at the moment in question, the first *tithi* of the dark fortnight was current.

In Tables 5 to 7, the column superscribed *w.* contains the figures 0 to 7, which serve to find the day of the week, as will be shown below.

Table 5 gives the values of *a. b. c. d.* for all the years of the 19th century. If the year in question is not contained in the 19th century, the corresponding year of the 19th century has to be taken; *i.e.* the year of the 19th century which is separated from the given year by complete centuries. To find the corresponding year, add the last two figures of the given year to A.D. 1800; *e.g.* the corresponding year of A.D. 484 is A.D. 1884.

Table 6 gives the values of *a. b. c. d.* for the centuries intervening between the given year and the corresponding one of the 19th century. To find them, subtract the given year from the corresponding year of the 19th century; *e.g.* A.D. 1884 — 484 = 14 centuries.

Table 7 gives the value of *a. b. c. d.* for the hour 0 or sunrise at Lañkā, of all days of the English year, and the three first months of the next year. The days of the month are entered in two columns. In the first twelve subdivisions of Table 7, for January to December, the first column applies to common years, and the second to leap-years. In the continuation of this Table for the following year, the arrangement is different. In January and February, the first column applies if the English year, preceding that to which these months belong, was a common year; the second, if it was a leap-year. In March, the second column applies if the English year, in which that month occurred, was a leap-year, or followed after a leap-year. The first column applies to the remaining years of our intercalary cycle. These last three Tables are to be used for the last part of the Hindu year; *viz.* for that part of the Hindu year which falls in the English year following that in which the beginning of the Hindu year fell. Table 8 gives the values of *a. b. c. d.* for hours and minutes.

All the quantities taken from Tables 5 to 8, are to be summed up in due order; then the equation of the sum of *b.* and that of the sum of *c.* (Tables 9 and 10), are to be added to the sum of *a.* The result will be the *A.* for the

moment in question, which is to be interpreted according to the *tithi* Table.

An example will set this in a clearer light. Let it be asked, what *tithi* was current on the 21st June, A.D. 484. We have

| | <i>w.</i> | <i>a.</i> | <i>b.</i> | <i>c.</i> |
|----------------------|-----------|-----------|-----------|-----------|
| Table 5 A.D 1884 | (3) | 765 | 746 | 2 |
| Table 6 14 cent. ... | (5) | 4626 | 734 | 67 |
| Table 7 21 June ... | (4) | 8245 | 242 | 471 |
| Leap year. — | | | | |
| | (12) | 3636 | 722 | 540 |

Table 9 arg. *b.* 722. eq. = 3

Table 10 arg. *c.* 540 eq. = 76

$A. = 3715$

As *A.* is between 3667 and 4000, it follows from the *tithi* Table that the 12th *tithi* of the bright fortnight was current.

The Week-Day can be found from the sum of *w.* 12 (put in brackets). *Rule*:—If *w.* is smaller than, or equal to 7, the number indicates the week-day, counting from Sunday as 1. If *w.* is larger than 7, retrench 7; if larger than 14, retrench 14. The remainder, in both cases, indicates the week-day, counting from Sunday as 1. In our example *w.* = 12; subtract 7; remainder, 5 = Thursday.

If it be required to know when the 12th *tithi* ended, subtract 3715 from 4000; the remainder is 285. With this remainder, 285, apply to Table 11, in order to find approximately the difference in time between the time when *A.* was = 3715 and when it was 4000. We find 200 = 14 hours, 10 minutes; 85 = 6 hours, 1 minute; so, 285 = 20 hours, 11 minutes; therefore the 12th *tithi* ended about 20 hours, 11 minutes, after sunrise in Lañkā.

If this approximation should not be considered sufficient, we add to the above found sums of *a. b. c.*, the value of *a. b. c.* for 20 hours, 11 minutes, from Table 8 We have found:—

| | <i>a.</i> | <i>b.</i> | <i>c.</i> |
|--------------------------|-------------|-----------|-----------|
| 21st June AD. 484 ... | 3636 | 722 | 540 |
| 20 hours (Table 8) ... | 282 | 30 | 2 |
| 11 min. „ ... | 3 | 0 | 0 |
| | 3921 | 752 | 542 |
| arg. <i>b.</i> 752 | | 0 | |
| arg. <i>c.</i> 542 | | 76 | |
| | $A. = 3997$ | | |

The difference between 4000 and 3997 being 3, shows (by Table 11) that the end of the *tithi* occurred 13 minutes after 20 hours, 11 minutes; or at 20 hours, 24 minutes, after sunrise at Lañkā.⁶ Therefore, as the 12th *tithi* ended on the 21st June, A.D. 484, that day was *śu di* 12.

If we want to know the name of the month of which the 21st June, A.D. 484, was the *śu di* 12, we count 12 days back from the 21st June: the day obtained, the 10th June, was the beginning of the month; and, accordingly, the preceding day, the 9th June, was the day of new-moon, always supposing that there was no *kṣaya* or *adhika tithi* between new-moon and *śu di* 12. Now, turning to Table 4, we find that the 9th June, A.D. 484, falls in the middle of the time assigned for the solar *Āshāḍha* (20th May to 20th June). Therefore, as the new-moon of the same month to which the *śu di* 12 under consideration belonged, fell within the solar *Āshāḍha*, we conclude that the 21st June, A.D. 484, was *śu di* 12 of the lunar month *Āshāḍha*.

On the Verification of Luni-Solar Dates.

Having shown how the Tables are worked, I shall now explain how, by their help, the most usual problem, that of converting a luni-solar date into one of our Calendar, can be solved.⁷

Let us suppose we had to verify the date A.D. 484, *Āshāḍha śu di* 12, Thursday. We first compute the *a. b. c.* for the beginning of A.D. 484, *viz.* :—

| | <i>a.</i> | <i>b.</i> | <i>c.</i> | |
|--------------|-----------|-----------|-----------|----------|
| 1884 ... (3) | 765 | 746 | 2 | Table 5. |
| 14 cent. (5) | 4626 | 734 | 67 | Table 6. |
| A.D. 484 (8) | 5391 | 489 | 69 | |

On the day *śu di* 12, *A.* must be near, but something less than, 4000 (such being the equivalent for the end of the 12th *tithi*). Subtracting 5391 from 4000, or, as this would leave a negative quantity, from 14000, we have,

as the remainder, 8609. Therefore, by adding 8609 to the *a.* of the beginning of A.D. 484, we get 4000; and all days, whose *a.* is 8609 or the next lower figure, are approximate dates for each *śu di* 12, the whole year round.

In the same way, by subtracting the *a.* for the beginning of A.D. 484, *viz.* 5391, from 10000, *i.e.* the equivalent of the new-moon, the remainder, in our example 4609, indicates approximately all the new-moon days of A.D. 484.

Now, with 4609, we turn to Table 7. Finding *Āshāḍha* at the foot of May, we select the days in May and June, whose *a.* is nearest to 4609, A.D. 484 being a leap-year, we find the 11th May and 10th June. We must now ascertain which of these two dates determines the beginning of the lunar *Āshāḍha śukla pakṣa*. This can be done with the help of Tables 1 to 4, as explained above; or, without using those Tables, the beginning and end of the *solar* months can be found in the following way:—At the foot of the Table we find that, on 1st solar *Āshāḍha*, *c.* is about (*i.e.* one smaller or larger than) 450. The *c.* of the beginning of A.D. 484 is 69. Adding 69 to the *c.* of the 11th May, $359 + 69 = 428$. This (428) being lower than the *c.* for 1st solar *Āshāḍha*, we conclude that the new-moon, occurring on the 11th May, fell in the solar *Jyāishtha*, and belonged, therefore, to the lunar month *Jyāishtha*. Trying the 10th June, we find its *c.* to amount to $444 + 69 = 513$. As this is between the *c.* for 1st *Āshāḍha*, *viz.* 450, and the *c.* for 1st *Śrāvaṇa*, *viz.* 536, we conclude that the new-moon occurring on the 10th June, or thereabouts, belongs to the lunar month *Āshāḍha*. Hence *Āshāḍha śu di* 12 must be later, by about 12 days, than the 10th June.

We have seen that, at the end of the 12th *tithi*, *a.* is equal to, or something less than, 8609. The 22nd June having for *a.*, 8583, which is nearest to 8609, the end of the 22nd *tithi* must have occurred either before or after the beginning of the 22nd June. To find the end

⁶ Mr. Sh. B. Dikshit (*ante*, Vol. XVI. p. 120) has calculated the same moment according to the modern Tables of Chhatre, the *Sārya-Siddhānta*, and the *Siddhānta-Samant*. He found,—Chhatre, 48 *ghatis* 12 *palas*; *Sārya-S.* 51 *gh.* 11 *p.*, *Siddhānta-S.* 53 *gh.* 21 *p.* Converting 20 hours, 24 minutes, into *ghatikis* and *palas* we get as the equivalent amount 51 *gh.* Our result, therefore, agrees nearly with that calculated by Mr. Dikshit on the basis of the *Sārya-Siddhānta*.

⁷ As, by our Tables, only those Hindu dates can be

converted into English ones, of which the concurrent English *a. or is known*, we are here concerned with the verification of the day only. However, in practice, the year will often be doubtful. In such cases, all years which come in question must be tried till that one is found in which the day fits in all particulars. Instead of calculating the date for all possible years, it will save time if we try the years according to the approximative method (Perpetual Lunar Calendar) which will be explained below.

of the *tithi*, we must add the *a. b. c.* of the 22nd June to the *a. b. c.* of the beginning of A.D. 484.

| | <i>a.</i> | <i>b.</i> | <i>c.</i> |
|--------------------------|-----------|-----------|-----------|
| A.D. 484 (see above) | (8) 5391 | 480 | 69 |
| 22nd June | (5) 8583 | 278 | 474 |
| | — — — — — | — — — — — | — — — — — |
| | (13) 3974 | 758 | 543 |
| | — — — — — | — — — — — | — — — — — |
| arg. <i>b.</i> 758 | 0 | | |
| arg. <i>c.</i> 543 | 79 | | |
| | — — — — — | | |
| <i>A.</i> = | 4059 | | |

A. being larger than 4000, the end of the 12th *tithi* must have occurred before the beginning of Friday, the 22nd June. Table 11 shows that our surplus, 59, is equal to 3 hours, 33 minutes. Hence the 12th *tithi* ended on the 21st June (about 20h. 27m.), and accordingly A.D. 484. Āshadhā *śa di* 12, was the 21st June.

It should be borne in mind that the time of any particular instant is reckoned from the mean sunrise at Lañkā. For any other place in India, two corrections are necessary:—

(1) The difference in time between the place in question and the meridian of Lañkā (on which lies Ujjain, 5 h. 3 m. 27 s. east of Greenwich), is to be added to or subtracted from the result found by my Tables, according as that place lies east or west of the said meridian. Table 15 serves for converting Lañkā time into local time, for the principal places in India as explained in the note to that Table.⁸ For instance:—if a *tithi* ended at Lañkā at 10 h. 54 m., it ended in Calcutta at 11 h. 44 m., in Multan at 10 h. 37 m. If the place under consideration is not contained in my List, take the most important one that is nearest to it.

(2) The time at which the sun at that place and on that day, rose before or after the completed sixth hour after mean midnight of that place.

The amount of this correction, for any given place and time, can be calculated with the help

⁸ This Table was suggested by Mr. Fleet, on the supposition that, in the majority of instances, the details should be worked out, not for the actual place, which a reader might wish to refer to, but for the principal place in the neighbourhood, or for the town at which the observer from whom the details were taken, resided. It is actually prepared, I have substituted the actual time for the longitude given by him, which is taken from *Fortner's table of India*.

⁹ The difference in time is obtained by multiplying

of Table 16. That Table shows how many minutes before or after sunrise at Lañkā (0 hour of my tables) the day began at places situated on the meridian of Lañkā or Ujjain at a Northern latitude of 5 to 30 degrees, on the days entered in the first and last columns of the Table. For places and days not entered in the Table, the amount may be calculated by a proportion. But it must be stated that the date may be wrong by one or two days.

The process by which we have obtained the result may be reduced to the following rules:—

1. Find the *a. b. c.* of the given year, by summing up the quantities for the corresponding year and the intervening centuries.
2. Find the Index of the new-moon days by subtracting from 10000 the *a.* of the given year.
3. Find the Index of the given *tithi*, by adding its equation (from the *tithi* Table) to the Index of new-moon.
4. Find the new-moon falling in the given solar Hindu month, by adding to the *c.* of the given year, the *c.* of the new-moon days in the English months corresponding to the given solar Hindu month. The footnote of Table 7 shows which new-moon day is to be selected. In doubtful cases determine the limits of the solar month, from Tables 1 to 4.
5. Try the day indicated by the Index of the *tithi*. If *A.* comes out larger than the equivalent of the proposed *tithi* (see *tithi* Table), it ended before sunrise; if smaller, after sunrise.
6. Apply the corrections due to the geographical site of the place, if necessary.

2nd Example.—In order to give a sample of the calculation, we shall convert into the corresponding English date, A.D. 1261. Jyāishtha *ba di* 4, Gurau. I give the calculation without further remark:—

the degrees of the difference of the longitudes of Ujjain and the different places by four. However, the amount thus found may differ in many cases from that assumed by the Hindus. The latter might easily be ascertained if someone would collect, from different places in India, old native almanacs or *Panchāngas*. But they must refer to an epoch not yet influenced by modern geographical science. By these means it would be easy to draw a map of India as it appeared to the Hindus themselves.

| | <i>a.</i> | <i>b.</i> | <i>c.</i> | |
|--------------------|-----------|-----------|-----------|---|
| A.D. 1861... (3) | 6257 | 896 | 4 | ● $a = 10000 - 9133 = 867$. |
| 6 Cent (4) | 2876 | 135 | 47 | 4th Tithi <i>krishṇa</i> paksha (1) $6333 - 9133$ or $6333 + 867 = 7200$ |
| A.D. 1261... (7) | 9133 | 31 | 51 | ● <i>Jyaishṭha</i> about 1st May $a = 636$: $c = 329 + 51 = 380$ > 364. |
| 20th May ... (6) | 7070 | 45 | 381 | 4th Tithi a 7200 about 20th May : $a = 7070$. |
| | (13) | 6264 | 76 432 | |
| arg. <i>b.</i> 76 | | 204 | | |
| arg. <i>c.</i> 432 | | 35 | | |

$$A. = 6593 - 6333 = +170 \text{ (or } 100 = 7 \text{ h. } 5 \text{ m., } 70 = 4 \text{ h. } 58 \text{ m.) } 12 \text{ h. } 3 \text{ m. before 20th May.}$$

The 4th *tithi* of the *krishṇa* paksha ended on the 19th May, which was a Thursday, about 11h. 57m.

3rd Example.—I select the following date because its calculation offers matter for some consideration:—

Vikrama-Samvat 1288, Phālguna *śu di* 10, Wednesday.

| | | | | |
|--------------|-----|------|-----|----|
| A.D. 1831 .. | (7) | 5528 | 213 | 4 |
| 6 Cent. | (4) | 2876 | 135 | 47 |

| | | | | |
|--------------|------|------|-----|----|
| A.D. 1231 .. | (11) | 8404 | 348 | 51 |
|--------------|------|------|-----|----|

The new-moons which come in question are to be looked for in January and February. But there are two Januaries and two Februaries in our Table 7. In this case, the Tables for the January and February at the end of Table 7 apply; those at the beginning of Table 7 applying to the same months of the preceding Christian year, *i.e.* to that part of A.D. 1231 which precedes the Hindu year. It will be seen that new-moon fell on the 24th January and 23rd February (or the preceding day), as the *a.* of these days is nearest to, but smaller than, 1596 (the index of new-moon). On the 24th January, the *c.* is $62 + 51 = 113$, which is near the *c.* required for Phālguna, *viz.* 114. It is therefore doubtful whether the lunar month, determined by the new-moon of the 24th February, is Māgha, or Phālguna. Turning to the 23rd February, we find $c. = 195$; *i.e.* it is near the *c.* required for 1st solar Chaitra (196.) Hence it is likewise doubtful whether a new-moon on the 23rd February inaugurated the month Phalgunā or Chaitra.

The year commenced in A.D. 1231; but the month Phalgunā fell in 1232. We can make either year the basis of our calculation, as will be seen in the sequel.

1st method; by starting from the English year in which the Hindu year *began*; *viz.* 1231. We proceed as in the above examples:—

$$● 1596. \text{ } \textit{śu di} 10 (1596 + 3333) = 4929.$$

In order to fix with more definiteness the beginning of Chaitra, we must have recourse to Table 4 (for the date in question falls in the leap-year, A.D. 1232).

We find that the solar Phālguna ran from the 25th January to the 23rd February, astronomically from 24th January 13 h. 40 m. to 23rd February 8 h. 50 m. As will be remembered, we have only approximately determined the dates of new-moon; we must now calculate them accurately.

| | | | |
|-----------|------|-----|-----|
| A.D. 1231 | 8404 | 348 | 51 |
| 24th Jan. | 1389 | 81 | 62 |
| 13 hours. | 183 | 20 | 1 |
| 40 min. | 9 | 1 | 0 |
| | 9985 | 450 | 114 |
| arg. 150 | 184 | | |
| arg. 114 | 20 | | |

$$189 = 13 \text{ hours, } 23 \text{ minutes}$$

Accordingly new-moon occurred 13 h. 23 m. before solar Phālguna, and belonged therefore to Māgha. We calculate 0 Chaitra :—

| | | | |
|---------------|------|-----|-----|
| A.D. 1231... | 8404 | 348 | 51 |
| 23rd Feb. ... | 1548 | 169 | 144 |
| 8 hours | 127 | 14 | 1 |
| 50 min. | 12 | 1 | 0 |

| | | |
|----|-----|-----|
| 91 | 532 | 196 |
| == | == | == |

arg. 532..... 112

arg. 196..... 2

205 = 14 hours. 31 minutes.

Accordingly, new-moon occurred 14 h. 31 m. before 0 solar Chaitra, and belonged therefore to Phālguna. In order to find *śu di* 10, we proceed, as usual, by adding, to the *a. b. c.* of A.D. 1231, the *a. b. c.* of that day after the 22nd February, the *a.* of which is next below 4929 (or the index for *śu di* 10).

A. D. 1231 ... (11) 8404 348 51

3rd March. ... (9) 4596 496 169

| | | |
|-----------|-----|-----|
| (11) 3000 | 844 | 220 |
| == | == | == |

arg. *b* 844, eq.....24

arg. *c* 220, eq..... 1

A. = 3025 = 1 h. 46 m.

As *A.* for *śu di* 10 is between 3000 and 3333, we see that the 10th *tithi* was running at the beginning of the 3rd March. That it ended in the same day, is evident from the fact that the *a.* of the 4th March, *viz.* 4935, is, by itself, larger than the index for *śu di* 10, which we have found to be 4929, and will become still more so by adding the equations of *b.* and *c.* Let us calculate also the 4th March :—

A.D. 1231 .. 8404 348 51

4th March .. 4935 532 171

| | | |
|------|-----|-----|
| 3339 | 880 | 222 |
| — | — | — |

arg. *b.* 880, eq. ...44

arg. *c.* 222, eq. ... 1

A. = 3384

Subtract 3333; the remainder 51 = 3 h. 37 m. Hence the 10th *tithi* ended 3 h. 37 m. before sunrise at Lañkā, on the 3rd March, which was a Wednesday, as required. The end of the 10th *tithi* being near the beginning of the day, we must now consider whether the result may be influenced by the geographical position of the locality to which the record belongs: *viz.*, Girnār being about 21 minutes (of time) west of the meridian of Lañkā (or Ujjain), the day begins there about 21 minutes later than on the meridian of Ujjain. Hence the 10th *tithi* ended about 3 h. 58 m. before the end of the 3rd March. Again, the sun rises, before the 21st March, later on the circle of latitude of Girnār, than on the equator, on which Lañkā is supposed to be situated. The difference still more removes the end of the 10th *tithi* from the end of the 3rd March, as compared with the same moment at Lañkā. The date, as we have found it, stands, therefore, proof against all doubts which can be raised against it. As regards the week day, the (11) shows that it was the fourth day or Wednesday as required.

2nd method. In calculating the date, we can also start from A.D. 1232, the Christian year in which the date fell. But, in that case, we must make use of the first part of Table 7. We shall sum up the figures for the 3rd March A.D. 1232 :—

| | | | |
|-------------------|------|-----|-----|
| A.D. 1232 ... (1) | 9128 | 460 | 3 |
| 6 Cent (4) | 2876 | 133 | 47 |
| 3 March (6) | 995 | 256 | 170 |
| | — | — | — |
| (11) | 2999 | 845 | 220 |
| | == | == | == |

Comparing this result with that found above, we see that *a.* is smaller, *b.* larger, by one, than found above.¹⁰ This difference is caused by our neglecting fractions below $\frac{1}{2}$, and counting them as 1 if larger than $\frac{1}{2}$.

4th Example.—An intercalary month. As a month is intercalated when two new-moons occur within one solar month,—one soon after the beginning, and the other shortly before the end, of the solar month,—all that is required to decide any case, is, to calculate the phase of the moon on the beginning and the end of the solar month. If the moon was waning at the

¹⁰ The last method must be followed in cases in which the Hindu year begins in Kārttika (Sept.-Oct.), and the

date in question is later than March of the succeeding English year

beginning, and waxing at the end, of the solar month, a month was intercalated.

In the year 958 of the Chêdi era, which has been identified with A.D. 1207 (the *Academy*, 14th January, 1888) there was an intercalary Âshâdha. We must first ascertain the astronomical limits of solar Âshâdha from Table 3. In A.D. 1199 Âshâdha began on the 26th May,

Laikâ time 12 hours; accordingly in 1207, *i.e.* 2×4 years afterwards, 2×50 minutes = 1 hour 40 minutes later, or on the 26th May, 13 h. 40 m. Again, in A.D. 1231 solar Śrâvana began (or Âshâdha ended) on the 26th June, at 12 hours; accordingly in 1307, *i.e.* 19×4 years afterwards, 19×50 min. = 15 h. 50 m. later, or on the 27th June, at 3 h. 50 m.

We calculate *A.* for both instants:—

| | | | |
|-------------|------|-----|----|
| A.D. 1807.. | 7080 | 81 | 4 |
| 6 Cent..... | 2876 | 135 | 47 |

| | | | |
|--------------|-------------|------------|------------|
| A.D. 1207... | 9956 | 216 | 51 |
| 26th May ... | 9102 | 262 | 397 |
| 13 hours ... | 183 | 20 | 1 |
| 40 min. ... | 9 | 1 | 0 |
| | <u>9250</u> | <u>499</u> | <u>449</u> |

arg. 499 140

arg. 449 41

A. = 9431

| | | | |
|---------------|-------------|------------|------------|
| A.D. 1207 .. | 9956 | 216 | 51 |
| 27th June ... | 9938 | 424 | 485 |
| 3 hours | 42 | 5 | 0 |
| 50 min. | 12 | 1 | 0 |
| | <u>9948</u> | <u>646</u> | <u>536</u> |

arg. 646 28

arg. 536 74

A. = 50

This calculation shows that the beginning of solar Âshâdha occurred before, and the end after, new-moon ($A. = 0$ or 10000), *i.e.* two new-moons fell within solar Âshâdha. Accordingly there was an intercalated lunar Âshâdha as required.

5th Example.—A *Samkrânti*:—

Śaka 1126 (A.D. 1204) Pausha *śu di* 2, Saturday, at the *uttarâyana*.

The *uttarâyana* begins with the solar Mâgha. That month began, according to Table 4, in A.D. 1204, on the 25th December. Our calculation stands thus:—

| | | | |
|-----------------|-------------|------------|-----------|
| A.D. 1804 (1) | 5940 | 306 | 4 |
| 6 cent. ... (4) | 2876 | 135 | 47 |
| 25 Dec. ... (2) | 1569 | 29 | 983 |
| | <u>7385</u> | <u>470</u> | <u>34</u> |

arg. 470 166

arg. 34 47

598

Accordingly the 25th December was a Saturday, its *w.* being 7; and, the second *tithi* ending in it, it was Pausha *śu di* 2, as required.

Before leaving this part of our subject, I will add a few remarks that may prove useful. It is obvious that every lunar date can be converted into the corresponding English one; but such lunar dates only can be *verified*, *i.e.* shewn to be correct notations of real and particular moments of time, which are coupled with some other chronological item not purely or chiefly derived from the position of the moon. In most cases the concurring notation will be the week-day. As the verification of the week-day is a much simpler process than, and can be done simultaneously with, ascertaining the date of the *tithi*, it will save time to calculate at once the correct week-day. Let us do so with our first example. We have found (8), 5391, 480, 69, as the (*w.*) *a. b. c.* of the 1st January, A.D. 484. As the figure (8) of the week-day is above 7, subtract 7, and put (1) instead of

(8). The 22nd June has been found to be the approximate day of Āshāḍha *śu di* 12. But the *w.* of the 22nd June is (5), which added to (1) from above makes (6) or Friday, instead of Thursday as required in the inscription. We therefore calculate the 21st June as the probable date of *śu di* 12. The result proves that we have guessed rightly. But if the *tithi* does not come out as required, we can, without further calculation, say that the *date* is *wrong*; provided we have singled out the correct month and *paksha* and overlooked no *adhika* month. For, say that, instead of the 12th *tithi*, the 11th would be found running at sunrise of the corresponding week-day, in that case the next day would be the 12th (or, if the 12th *tithi* was *kshaya*, the 13th), but the week-day would be wrong. In the assumed case, the date would be wrong, either because the inscription was a forgery, or because the scribe committed a blunder.

Correction due to the Moon's Latitude.

Probably common almanac-makers neglected this correction, which influences the result only when the end of a *tithi* occurs within a quarter of an hour off the beginning of the day. *Rule*:—Add to the tenth part of *a.*, 20 ÷ the half part of *d.* If the sum is above 500, subtract 500; the remainder is the Index for the following Table. If it is below 500, the remainder itself is the Index. The equation is according to its sign, to be added to or subtracted from *d.*

| <i>Index</i> | <i>Equation.</i> | <i>Index.</i> |
|------------------------------------|------------------|---------------------------------------|
| from 0 to 10 or } " 240 " 250 } | 0 0 | { from 250 to 260 or " 490 " 500 } |
| " 20 " 30 or } " 220 " 230 } | -1 +1 | { " 270 " 280 or " 470 " 480 } |
| " 40 " 70 or } " 180 " 210 } | -2 +2 | { " 290 " 320 or " 430 " 460 } |
| " 80 " 170 } | -3 +3 | " 330 " 420 } |

On Mean Intercalations.

It is highly probable that in ancient times mean intercalations were used, i.e. a month was intercalated when two mean lunations fell within one mean solar month. As the mean lunation is smaller than the mean solar months, there could be no expunged months while mean intercalations were used. My Tables give the moment of mean new-moon with great accuracy. Mean new-moon happens when the sum of *a.* + 200 = 0 or 10000. But the beginning of a mean solar month is less accurately defined by *c.*, which remains unchanged for many hours. The increase of *c.* in a mean lunar month being 80.39, and in a mean solar month 83.33, it follows that a mean intercalation is due when, at the time of mean new-moon, *c.* is equal to, or larger by one or two than, the *c.* required for the beginning of the given mean solar month. as shown in the following Table:—

| | | |
|----------------|----------------|-----------------|
| Vais. 236 | Bhādr.... 619 | Pausk.... 952 |
| Jyai. 369 | Āsvi. ... 702 | Māgh.... 36 |
| Āsh. 452 | Kārtt. ... 736 | Phālg.... 110 |
| Śrāv. 536 | Mārg. ... 869 | Chaitr. ... 202 |

However, the calculation gives not absolutely reliable results; for it is just possible that, instead of the month that is actually obtained the preceding or the next one was intercalated.

On Eclipses.

The *d.* of my Tables gives the equivalent for the distance of the sun from the nodes of the moon's orbit. The amount of *d.*, therefore, shows whether, on the days of new-moon and full-moon, a solar or lunar eclipse was likely to occur. For any other days but those of new-moon or full-moon, *d.* is of interest for chronological purposes only when the correction for the moon's latitude is to be addibited as explained under the Correction due to the Moon's Latitude.

The occurrence of an eclipse is ascertained by the following rules:—

| | | | |
|--------------|--------------|--------------------|----------------------------|
| At new-moon | { certain | if $d.$ is between | 924 and 1000, or 0 and 76. |
| a solar | { doubtful | " " " " | 894 " 924, or 76 " 106. |
| eclipse is | { impossible | " " " " | 106 " 894. |
| At full-moon | { certain | if $d.$ " " | 950 and 1000, or 0 and 50. |
| a lunar | { doubtful | " " " " | 930 " 950, or 50 " 70 |
| eclipse is | { impossible | " " " " | 70 " 930. |

Example.—Was there a lunar eclipse in Śrāvāṇa, A.D. 1144?

$a.$ $b.$ $c.$ $d.$
 A.D. 1544 3352 526 3 97 ● $a = 10000 - 7698 = 2302$. 2nd July (c 554) new moon Śrāvāṇa
 7 cent..... 4345 535 50 522 ○ $a = 2302 + 5090 = 7392$.

A.D. 1144 7697 111 53 919

17 July, l.y. 7049 186 542 142

4746 297 595 61

eq. $b.$ 274

eq. $c.$ 35

$A. = 5115$

Full-moon occurred about 5 h. 13 m. before the beginning of the 17th July; or on the 16th July, about 15 h. 47 m. The increase of $d.$ in eight hours being 2, 2 must be retrenched from 61. The remainder is 59. Therefore, as 59 falls within the limits of a doubtful lunar eclipse, it is likely that there was a small lunar eclipse; as will be found to be the fact by referring to the "Canon of Eclipses," the great work of Oppolzer (Denkschriften der Kaiserl. Akademie der Wissenschaften in Wien 1887, which has superseded the "L'art de vérifier les dates," from which is extracted Cunningham's List of Eclipses in his *Indian Eras*.) The example just given shows at once the advantage and the disadvantage of my method. The advantage consists in this,—that by the same calculation we come to know the moment of

new-moon or full-moon, and whether at that time a solar or lunar eclipse has happened or not. The disadvantage consists in leaving some cases doubtful. The latter is especially the case with solar eclipses. For, our calculation does not show whether an eclipse of the sun was *visible* in India, even if the sun was, at the time of the eclipse, above the horizon.¹¹ But an eclipse of the moon is visible wherever the moon is above the horizon of the observer; *i.e.* wherever the eclipse of the moon occurs at night. To conclude,—if one of the above-named works on eclipses is available, they should be used in preference to the approximate calculation. But, if no other means are at hand, this calculation, which is an ingenious device of M. Largeteau, will be found useful.¹²

¹¹ For calculating such or any other particulars connected with solar eclipses, the reader is referred to Schram's Tables (Denkschriften d. K. A. d. W. Wien 1886) which are supplementary to the "Canon of Eclipses." With the help of these two works all problems referring to eclipses can now be solved by an easy calculation.

¹² It must be remarked, that eclipses, especially solar ones, instanced in historical documents, were, in many cases, not actually observed eclipses, but calculated ones. For the smaller solar eclipses, if not calculated beforehand, would pass unobserved; since even the larger ones (say up to 7 degrees) are seen only under

favorable circumstances, as when the sun is setting or rising, or is seen through a fog or thin cloud. Therefore eclipses mentioned in inscriptions are generally to be interpreted as calculated, not as actually observed. As the result of a calculation of an eclipse varies with the different Siddhāntas, and as it is correct only for a period within a few centuries of the composition of the Siddhānta used, it will be safest to identify the eclipses mentioned in inscriptions with such as actually occurred, but keeping in mind the eventuality that, within a few years near the limits of a possible eclipse, the Hindus may have predicted an eclipse when none did occur or did occur.

On Karāṇas.

"Half the portion of a *tithi* is established as that of the *karāṇas*," (*Sūrya-Siddhānta*, ii. 69). There are, therefore, 60 *karāṇas* in one lunar month. Their names and numbers are given in the following table :—

| | |
|---------------|--------------------------------|
| Kimstughna... | 1 |
| Bava | 2, 9, 16, 23, 30, 37, 44, 51, |
| Bālava | 3, 10, 17, 24, 31, 38, 45, 52, |
| Kaulava | 4, 11, 18, 25, 32, 39, 46, 53, |
| Taitila | 5, 12, 19, 26, 33, 40, 47, 54, |
| Gara | 6, 13, 20, 27, 34, 41, 48, 55, |
| Bañij | 7, 14, 21, 28, 35, 42, 49, 56, |
| Vishṭi | 8, 15, 22, 29, 36, 43, 50, 57, |
| Śakuni | 58, |
| Nāga | 59, |
| Chatushpada.. | 60. |

As we know how to calculate a *tithi*, we shall have no difficulty in verifying a *karāṇa*. For instance, suppose it be stated in a document,—*śu di* 5, in the *karāṇa* Bālava. Bālava, the tenth *karāṇa*, ended at the same moment with the 5th *tithi*; being in fact the latter half of it. We therefore calculate, as explained above, the end of the 5th *tithi*. The *karāṇa* in question was the time of about 11 to 12 hours preceding the moment found by our calculation for the end of the 5th *tithi*.

On Nakshatras and Yōgas.

The *nakshatra*, in which the moon is at any given moment, can, by the help of my Tables, be found with sufficient accuracy. The *yōga*, an astrological element, will be found by the same operation required for the *nakshatras*. We treat, therefore, of the *nakshatras* and *yōgas* at the same time.

Rule for finding the Nakshatra.—From the *c.* of the date in question subtract 279·4 augmented by the tenth part of the equation of *c.* If *c.* is smaller than the sum to be subtracted, add 1000 to *c.* (This is the true longitude of the sun expressed in thousandth parts of the circle). Add to this, the tenth part of *A.* for the date in question. The result, taken as Index, shows, by Table 17, the *nakshatra* in which the moon is at the given moment.

Rule for finding the Yōga.—Add to the result, just found, the true longitude of the

sun, calculated according to the above rule; the sum indicates as Index the *yōga*, current at the moment in question, by the same Table.

Example.—Find the *nakshatra* and *yōga* for sunrise on the 11th May, A.D. 1824 :—

| | | | | |
|------------|------|-----|-----------------------|-----------------|
| A.D. 1824 | 9646 | 416 | 3 | |
| 11 May ... | 4361 | 754 | 359 | |
| | 4007 | 170 | 382 | + 279·4 |
| | | | $\frac{1}{10}$ eq. c. | 1·3 |
| eq. b. | 263 | | | |
| eq. c. | 13 | | | 280·7 |
| A. = | 4283 | — | 280·7 | |
| | | | | Long. of ☉ 81·3 |

428 + 81, = 509, Index of *nakshatra*, viz. Chitrā
509 + 81, = 590, Index of *yōga*, viz. Siddhi.

And in the *Ravi-Pañchāṅgam* (Warren's *Kala-Sankalita*, p. 317) we find that, on the 11th May, A.D. 1824, the moon was in the *nakshatra* Chitrā, and that the *yōga* Siddhi continued for 5 *ghaṭis* after sunrise.

If it is required to know more accurately the beginning of a *nakshatra* or *yōga*, the Table for Differences must be applied. For instance, we found 590 as Index of the *yōga*. Subtracting 590 from 594 (the beginning of Vyatīpāta), we get as the remainder 4. The Table for Differences shows that the Δ 4 is equal to about 2 h. 27 m. Accordingly, the *yōga* Vyatīpāta began about 2 h. 27 m. about 6 *ghaṭis* after sunrise at Lañkā.

This calculation is not very accurate, as an error of one unit in the Index makes a difference of above half an hour. But, for chronological purposes, this degree of accuracy will be all that is wanted.

There is also another method of reckoning *yōgas* in use, for the particulars of which the reader is referred to Colebrooke, *Miscellaneous Essays*, Vol. II. p. 363 (new edition, p. 319).

In some inscriptions (e.g. *ante*, Vol. XII. pp. 18, 254,) the *nakshatra* is mentioned together with the date. But, on calculating the date, I have found that the *nakshatra* in which, by my method, the moon must have been at that time, does not agree with the *nakshatra* given in the inscription. Nor does the week-

day come out right. It is therefore doubtful whether the dates of those inscriptions are correct. But I find that the date in Vol. XII. p. 258, is correct when calculated for the time of full-moon.

PART III.—THE PERPETUAL LUNAR CALENDAR.

Many chronological questions can be more readily solved if the whole lunar year, together with the corresponding English year, is exposed to our view. However, this cannot be done without a sacrifice of accuracy; *i.e.* we must rest satisfied with approximate results. Where no more than such an approximation is wanted, the Perpetual Lunar Calendar, exhibited in Table 12, will be found useful. In Table 12, every day is entered with a Roman cypher, the Epact, and one of the seven letters *a.* to *g.*, the Dominical Letter. To begin with the latter, the **Dominical Letters** serve to show on what day of the week fell any given date of any year, in which the week-day of one date is known. For instance, let us suppose that, in a certain year, the 5th March was a Wednesday. As the 5th March has the Dominical Letter *a.*, we know at once that all days having the same Dominical Letter *a.*, were Wednesdays. What were the week-days of the remaining Dominical Letters, will be found by the subsidiary Table 12, which needs no explanation. If no week-day is known from other sources, the week-day of the 1st March, or the value of the Dominical Letter *d.*, can easily be found by help of Table 14, which gives the value of the Dominical Letter *d.*, from A.D. 0 to 2000, Old Style. The **Epacts** are arranged in such a way, that the same phase of the moon approximately occurred throughout the English year and the first four months of the next, on all days having the same Epact. For instance, if of some given year the 10th March, having the Epact *X.*, was the day of a new-moon, a new-moon occurred on all days having the Epact *X.*, throughout the year, *i.e.* on the 9th April, 8th May, etc. As the initial date of the lunar month immediately follows

the day of new-moon, the initial day of all lunar months will be found by adding *one* to the Epact of the new-moon day of the year under consideration. As Cunningham's Table XVII. gives the initial day of the luni-solar years, the date taken out from that Table serves to find the beginning of all lunar months. But Cunningham's dates are, in many cases, apt to mislead; for they are calculated for mean midnight of Ujjain; whereas, in civil reckoning—the days are accounted to begin with sunrise. Therefore, if the mean new-moon falls between midnight and sunrise, Cunningham couples it with the following day, whereas, actually, it belonged to the preceding one. Hence a fourth part of Cunningham's dates is a day too late. To find with perfect accuracy the date of mean new-moon, my Tables may be used thus,—Add 200 to the *a.* of the corresponding year, then add the *a.* for the intervening centuries. Subtract the *a.* thus found from 10000. The remainder is the *a.* on which the mean new-moon occurred throughout the whole year. For instance, in A.D. 1468 we have $10000 - (1800 + 200 + 9936) = 10000 - 1936 = 8064$. Hence, mean new-moon occurred, *e.g.*, late on the 23rd March, as that day has the next lower *a.* (7768), and Chaitra *śuđi* 1 fell, *i.e.* ended, on the 24th March. For the reasons stated above, Cunningham gives the 25th March for the beginning of the luni-solar year.

However, without reference to the Tables, the day of new-moon in March can be found for any given year, and, at the same time, for a good many years preceding and following it, by Table 13.

The second Part of this Table gives the date in March on which new-moon occurred in the years A.D. 304 (9) to 379 (75); the fraction gives the complete quarters of the day, after which the conjunction took place. The same dates, in the same order, are valid for the next 76 years; but a quarter of a day must be subtracted from each; after 152 years two quarters must be subtracted; after 228 years, three quarters, and after 304 years (in A.D. 668 etc.) a complete day must be retrenched from the date found.¹³

¹³ The correctness of these rules can easily be demonstrated by the above Tables. The difference of the relative positions of the sun and the moon after 76 years, is found by subtracting the *a.* of A.D. 1801 (5138) from that of A.D. 1876 (5222). The remainder 84 is nearly equal to the fourth part of the increase of *a.* for one day

$339 = 85$. In 304 years it amounts to 335 instead of 339, which would be the increase of *a.* for one complete day. Our error, therefore, is about 20 minutes in 304 years; and even in the 19th century the error is only 1 or 25 m., which may be neglected without any practical consequences.

Therefore, to find the date of new-moon in March for any year, *e.g.* A.D. 1463, subtract from it the next lower figure under I. in Part the First (1216), and put down apart the subtractive quantity in parenthesis (—3; see Table I., example). From the remainder (252) subtract, if it is greater than 76, the next lower figure under II. of Part the First (228) and put apart the subtractive quantity. The second remainder (24) is to be looked out in Part the Second in the column *y*. From the date thus found (274), subtract the sum of the subtractive quantities (3½) set apart; the result will be the date of mean new-moon in March for the year in question. By adding or subtracting 14½ we get the day of mean full-moon. Augment the date of new or full moon by *one*, to find the Epact of the beginning of the *śukla* or *kṛishṇa* *pakṣa*. If the Epact turns out to be above 30 deduct 30 from it, to find the correct Epact. Knowing the beginning of the month, it will be easy to verify, approximately, any day of it, by counting onwards, making the *śukla pakṣa* consist of 15 days, and the *kṛishṇa pakṣa* of 14 days and 15 days alternately, as done by Cunningham. The result, thus arrived at, is the same as that arrived at by Cunningham's method, if the initial day of the year falls in March. If it falls in February, there is sometimes a difference. For, if the date to be verified falls in a series of 30 Epacts, my date will be one day earlier than Cunningham's date; but if the date falls in a series of 29 Epacts, Cunningham's method and mine yield the same result.¹⁵

It remains to ascertain the names of the Hindu months, the initial days of which are indicated by the Epact as explained above. The name of the lunar month depending on the solar month in which new-moon occurred, all that is required, is, to know on which days the solar months commenced. This information is furnished by the following arrangement of my Table 12. The names of the solar months are placed above those of the English months in such a way that the first part of the Sanskrit name is written above the latter part of the English name of that English month

in the *later* part of which (below the horizontal stroke) the solar Hindu month commenced.¹⁶ For instance, the solar Śrāvaṇa begins in June and ends in July. The initial date of the solar month is marked by a number (4 to 19) placed between the Epact and the Dominical Letter. These numbers indicate the century A.D. in which, approximately, the solar month commenced on the day marked by the number of the century: thus Śrāvaṇa, in A.D. 600 to 700, began on the 23rd June, that day being marked by 6.

It will be noticed that January and February in the large Table, and March and April in the Continuation-Table, have two columns; one is to be used for common years, and the other for leap-years, as indicated by the headings of the column.

An example will set the application of my Table in a clear light. On what day, in A.D. 897, fell Pausha śu di 1? Cunningham's Table XVII. gives as the initial date of the Hindu year, Sunday, the 14th March. This day is marked XIVc. in my Table. The Epact XIV. occurs in December, on the 5th; this day is Pausha śu di 1, because it fell in the solar Pausha which in A.D. 700 to 800 ran from the 23rd November to the 22nd December, as indicated by the number 7 placed after the Epact of those days. The 5th December has the Dominical Letter c., just as the 14th March, which was a Sunday. Therefore, in A.D. 897, Pausha śu di 1 fell on Sunday, the 5th December.

An additional advantage of my method, as will have been remarked, is, that no regard is taken of intercalary or expunged months intervening between the initial day of the Hindu year and the date to be verified.

I conclude with a practical hint. If a list of eclipses is at hand, some new and full moons of every year may be taken from it. For the day of a lunar eclipse is, of course, a full-moon day, and a solar eclipse coincides with new-moon. Taking the Epact of the date of an eclipse, may serve to check a result arrived at by starting from the initial day of the Hindu year as given in Cunningham's Table XVII.

¹⁵ Cunningham's date differs from mine, both as to day and month, in the case of leap-years only.

¹⁶ In the more recent centuries preceding our time the beginning of the solar month has slipped to the first part of the next Christian month.

PART IV.—THE CONSTRUCTION OF TABLES 5 to 11.

As stated above, my Tables are those of M. Lageteanu, adapted to the doctrines and elements of Hindu astronomy, especially those of the *Sūrya-Siddhānta*. The inaccuracy of the elements of Hindu astronomy becomes perceptible in calculations for long intervals of time: but, if the interval of time is only a few years, the result of the Hindu calculation may be considered correct for all practical purposes. Therefore Table 7, which gives the increase of a, b, c . for the 356 days of the year, could be adopted from the original Tables, without any change beyond omitting two columns not wanted, and adding one, *viz.*, for finding the weekday. But Tables 5 and 6 had to be entirely recalculated. I shall explain how this was effected, in order to show that my Tables must yield correct results.

The epoch of Hindu astronomy is the beginning of the Kaliyuga; according to the *Sūrya-Siddhānta*, at midnight, at Laṅkā, of the 17th-18th February, Old Style, B.C. 3102. As the civil day is usually reckoned to begin with sunrise at Laṅkā, the beginning of the Kaliyuga according to the *Sūrya-Siddhānta* may be stated as B.C. 3102, 17th February, Old Style, 13 hours, Laṅkā time. (According to the *Ārya-Siddhānta*, the Yuga began 6 hours later, or on the 18th February, 0 hour, Laṅkā time.) At that epoch, according to the *Sūrya-Siddhānta*, the mean moon and sun were in the initial point of the Hindu zodiac; the longitude of the moon's perigee was 9 signs; and the sun's perigee was practically at the same place as at present, *viz.* $257^{\circ} 17'$ of the initial point of the Hindu zodiac. Accordingly a , or the difference of the mean longitudes of the sun and the moon, was 0° . But we must subtract the constant quantity 200.5 by which the difference of the longitude of the sun and the moon is diminished, in order that the equations of b and c may be always additive, and not additive in some cases, and subtractive in others.

Hence, a , was $10000 - 200.5 = 9799.5$.

b , or the moon's mean anomaly, was $90^{\circ} = 90.250$ of the circle, or in my notation 250.

c , or the sun's mean anomaly, was $102^{\circ} 52'$, or in my notation 285.8

Instead of starting from this epoch and adding the increase of these quantities for the time elapsed between the epoch and the given date, as would be more in accordance with the practice of the Hindus, we start from the 1st January of the corresponding year of the 19th century, for the hundred years of which the value of a, b, c . had to be calculated. Suppose the correct value of a, b, c . for the corresponding year to be known, the same for the given year can be found, by subtracting the increase of a, b, c . for the complete elapsed centuries. But to convert the subtractive increase into an additive quantity, we subtract the increase from 1, and add the remainder. This remainder is entered in Table 6 as a, b, c . In the way thus explained, the a, b, c . for the 1st January of any year can be found. For any other date, we add to the a, b, c . for the 1st January the increase up to the given day as registered in Table 7.

According to the rules just laid down, we will now calculate the a, b, c . for the beginning of the Kaliyuga, the amount of which quantities has been specified above according to the *Sūrya-Siddhānta*.

The corresponding year of B.C. 3102 (beginning of the Kaliyuga) is A.D. 1899, the interval being 5000 years. Adding to the a . of Kaliyuga 0, the increase of a . in 5000 Julian years, we get the a . for A.D. 1899, 17th February, 13 hours, Old Style, or 1st March, 18 hours, New Style. Our Tables serve, however, for the inverse problem; thus, we start from a . for A.D. 1899, and add to this, a . for 5000 years, and a . for the 1st March, and a . for 18 hours. The two last positions are equal to the increase of a . for 59.75 days. Now we have the proportion:—As the synodical revolution of the moon in a Yuga is to the increase of a . in 5000 years, so the days in a Yuga are to the days in 5000 years; *viz.* —

$$\text{increase of } a = \frac{182670 \times 5343336}{1577917828} = 61842.65624$$

in 5000 Julian years.

Hence, increase in 1000 years is 12368.53126, and increase in 100 years is 1236.853126. In the same way the increase of a . in 59.75 days will be found to be 2.023326.

Now rejecting complete revolutions, and subtracting the fraction from 1, the remainder is to be used as a . for 5000 years, *viz.* 3437.2, a .

for 1000 years, *viz.* 4687·4; *a.* for 100 years, *viz.* 1468·7.

Our calculation will be as follows:—

A.D. 1899 ... 6129
5000 years ... 3437·2
59·75 days 233·26

Kaliyuga 0... 9799·46

The difference from 9799·5 being smaller than can be expressed in my Tables, the calculation has proved that the *a.* for A.D. 1899 is correctly given.

From the *a.* of A.D. 1899 the *a.* for the remaining years of the 19th century was found by subtracting the increase of *a.* for the interval between A.D. 1899 and the particular years, rejecting the fraction, or counting it as 1, according as it was less or greater than a half. The *a.* in Table 6 was found as stated above. But, for 3 and more centuries, the increase of *a.* for 12 complete days, 4064, is to be added on account of the difference between the Old and the New Style: *e.g.* 10 cent. = 4687 + 4064 = 8751.¹⁶

In an analogous manner was found the *b.* of Tables 5 and 6. The proportion holds:—As the anomalistic months in the Yuga are to the increase of *b.* in 5000 years, so the days in the Yuga are to the days in 5000 years; *viz.*—increase of *b.* = $\frac{1826250 \times 57265193}{1577917828} = 66277·5056$ in 5000 Julian years.

Hence the increase in 1000 years is 13255·5011; in 100 years, 1325·5561; and in 59·75 days, 2·1684. And *b.* for 5000 years is 494·4; for 1000 years, 498·9; and for 100 years, 149·9.

Therefore, as above:—

b.
A.D. 1899 587·2
5000 years 494·4
59·75 days 1·5 4

Kaliyuga 0 2500

Accordingly *b.* for A.D. 1899 is 587·2. But, as the fraction is smaller than $\frac{1}{2}$, we reject it.

The remaining operations are the same as with *a.*¹⁷

For determining *c.* we say:—As the anomalistic revolutions of the sun in the Kalpa is to the increase of *c.* in 5000 years, so the days in the Kalpa are to the days in 5000 years; *viz.*—increase of *c.* in 5000 Julian years =

$$\frac{18262500 \times 1319000613}{1577917828000} = 4999·8796.$$

Hence the increase in 1000 years is 999·9759; in 100 years, 99·9976; in 59·75 days, 0·1636; and *c.* for 5000 years is 1204; for 1000 years, 241; and for 100 years, 24.

Therefore, as above:—

A.D. 1899 1·8
5000 years 120·4
59·75 days 163·6

Kaliyuga 0 285·8

Accordingly *c.* for A.D. 1899, *viz.* 2, is too large by only 0·2.

Tables 9 and 10 are calculated according to the rules of the *Sārya-Siddhānta*, on which we need not enter here.

Possible Error.

As in the Tables fractions are neglected or counted as 1, according as they are less or larger than $\frac{1}{2}$, the absolute error in every quantity may amount to $\pm 0·5$. Usually the plus and the minus of the different figures will compensate for each other; but in extreme cases the neglected fractions may sum up to $\pm 2·5$ or $\pm 3·5$, according as five or seven figures are summed up to find *a.*, and the error in time will be 10 or 14 minutes respectively. In the same way, the error in the sums of *b.* and *c.* may mount up to $\pm 1·5$ or $\pm 2·5$, according as three or five figures are summed up. But the effect of these errors on the equations of *b.* and *c.*, and through them on *a.*, is not the same, but can be ascertained in every case, generally, it is very small.

¹⁶ In the way indicated Table 6 may easily be extended beyond the limits I have chosen, which were selected because the calendar now in use was not introduced before that time.

¹⁷ Some centuries ago a *b.* or correction, *viz.* 17·6, directed by the ratio $\frac{2}{3}$ of Table 5 would be *a.* or *b.* or *c.* by 5. This correction should be applied in dates of 500, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 5500, 6000, 6500, 7000, 7500, 8000, 8500, 9000, 9500, 10000, 10500, 11000, 11500, 12000, 12500, 13000, 13500, 14000, 14500, 15000, 15500, 16000, 16500, 17000, 17500, 18000, 18500, 19000, 19500, 20000, 20500, 21000, 21500, 22000, 22500, 23000, 23500, 24000, 24500, 25000, 25500, 26000, 26500, 27000, 27500, 28000, 28500, 29000, 29500, 30000, 30500, 31000, 31500, 32000, 32500, 33000, 33500, 34000, 34500, 35000, 35500, 36000, 36500, 37000, 37500, 38000, 38500, 39000, 39500, 40000, 40500, 41000, 41500, 42000, 42500, 43000, 43500, 44000, 44500, 45000, 45500, 46000, 46500, 47000, 47500, 48000, 48500, 49000, 49500, 50000, 50500, 51000, 51500, 52000, 52500, 53000, 53500, 54000, 54500, 55000, 55500, 56000, 56500, 57000, 57500, 58000, 58500, 59000, 59500, 60000, 60500, 61000, 61500, 62000, 62500, 63000, 63500, 64000, 64500, 65000, 65500, 66000, 66500, 67000, 67500, 68000, 68500, 69000, 69500, 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198500, 199000, 199500, 200000, 200500, 201000, 201500, 202000, 202500, 203000, 203500, 204000, 204500, 205000, 205500, 206000, 206500, 207000, 207500, 208000, 208500, 209000, 209500, 210000, 210500, 211000, 211500, 212000, 212500, 213000, 213500, 214000, 214500, 215000, 215500, 216000, 216500, 217000, 217500, 218000, 218500, 219000, 219500, 220000, 220500, 221000, 221500, 222000, 222500, 223000, 223500, 224000, 224500, 225000, 225500, 226000, 226500, 227000, 227500, 228000, 228500, 229000, 229500, 230000, 230500, 231000, 231500, 232000, 232500, 233000, 233500, 234000, 234500, 235000, 235500, 236000, 236500, 237000, 237500, 238000, 238500, 239000, 239500, 240000, 240500, 241000, 241500, 242000, 242500, 243000, 243500, 244000, 244500, 245000, 245500, 246000, 246500, 247000, 247500, 248000, 248500, 249000, 249500, 250000, 250500, 251000, 251500, 252000, 252500, 253000, 253500, 254000, 254500, 255000, 255500, 256000, 256500, 257000, 257500, 258000, 258500, 259000, 259500, 260000, 260500, 261000, 261500, 262000, 262500, 263000, 263500, 264000, 264500, 265000, 265500, 266000, 266500, 267000, 267500, 268000, 268500, 269000, 269500, 270000, 270500, 271000, 271500, 272000, 272500, 273000, 273500, 274000, 274500, 275000, 275500, 276000, 276500, 277000, 277500, 278000, 278500, 279000, 279500, 280000, 280500, 281000, 281500, 282000, 282500, 283000, 283500, 284000, 284500, 285000, 285500, 286000, 286500, 287000, 287500, 288000, 288500, 289000, 289500, 290000, 290500, 291000, 291500, 292000, 292500, 293000, 293500, 294000, 294500, 295000, 295500, 296000, 296500, 297000, 297500, 298000, 298500, 299000, 299500, 300000, 300500, 301000, 301500, 302000, 302500, 303000, 303500, 304000, 304500, 305000, 305500, 306000, 306500, 307000, 307500, 308000, 308500, 309000, 309500, 310000, 310500, 311000, 311500, 312000, 312500, 313000, 313500, 314000, 314500, 315000, 315500, 316000, 316500, 317000, 317500, 318000, 318500, 319000, 319500, 320000, 320500, 321000, 321500, 322000, 322500, 323000, 323500, 324000, 324500, 325000, 325500, 326000, 326500, 327000, 327500, 328000, 328500, 329000, 329500, 330000, 330500, 331000, 331500, 332000, 332500, 333000, 333500, 334000, 334500, 335000, 335500, 336000, 336500, 337000, 337500, 338000, 338500, 339000, 339500, 340000, 340500, 341000, 341500, 342000, 342500, 343000, 343500, 344000, 344500, 345000, 345500, 346000, 346500, 347000, 347500, 348000, 348500, 349000, 349500, 350000, 350500, 351000, 351500, 352000, 352500, 353000, 353500, 354000, 354500, 355000, 355500, 356000, 356500, 357000, 357500, 358000, 358500, 359000, 359500, 360000, 360500, 361000, 361500, 362000, 362500, 363000, 363500, 364000, 364500, 365000, 365500, 366000, 366500, 367000, 367500, 368000, 368500, 369000, 369500, 370000, 370500, 371000, 371500, 372000, 372500, 373000, 373500, 374000, 374500, 375000, 375500, 376000, 376500, 377000, 377500, 378000, 378500, 379000, 379500, 380000, 380500, 381000, 381500, 382000, 382500, 383000, 383500, 384000, 384500, 385000, 385500, 386000, 386500, 387000, 387500, 388000, 388500, 389000, 389500, 390000, 390500, 391000, 391500, 392000, 392500, 393000, 393500, 394000, 394500, 395000, 395500, 396000, 396500, 397000, 397500, 398000, 398500, 399000, 399500, 400000, 400500, 401000, 401500, 402000, 402500, 403000, 403500, 404000, 404500, 405000, 405500, 406000, 406500, 407000, 407500, 408000, 408500, 409000, 409500, 410000, 410500, 411000, 411500, 412000, 412500, 413000, 413500, 414000, 414500, 415000, 415500, 416000, 416500, 417000, 417500, 418000, 418500, 419000, 419500, 420000, 420500, 421000, 421500, 422000, 422500, 423000, 423500, 424000, 424500, 425000, 425500, 426000, 426500, 427000, 427500, 428000, 428500, 429000, 429500, 430000, 430500, 431000, 431500, 432000, 432500, 433000, 433500, 434000, 434500, 435000, 435500, 436000, 436500, 437000, 437500, 438000, 438500, 439000, 439500, 440000, 440500, 441000, 441500, 442000, 442500, 443000, 443500, 444000, 444500, 445000, 445500, 446000, 446500, 447000, 447500, 448000, 448500, 449000, 449500, 450000, 450500, 451000, 451500, 452000, 452500, 453000, 453500, 454000, 454500, 455000, 455500, 456000, 456500, 457000, 457500, 458000, 458500, 459000, 459500, 460000, 460500, 461000, 461500, 462000, 462500, 463000, 463500, 464000, 464500, 465000, 465500, 466000, 466500, 467000, 467500, 468000, 468500, 469000, 469500, 470000, 470500, 471000, 471500, 472000, 472500, 473000, 473500, 474000, 474500, 475000, 475500, 476000, 476500, 477000, 477500, 478000, 478500, 479000, 479500, 480000, 480500, 481000, 481500, 482000, 482500, 483000, 483500, 484000, 484500, 485000, 485500, 486000, 486500, 487000, 487500, 488000, 488500, 489000, 489500, 490000, 490500, 491000, 491500, 492000, 492500, 493000, 493500, 494000, 494500, 495000, 495500, 496000, 496500, 497000, 497500, 498000, 498500, 499000, 499500, 500000, 500500, 501000, 501500, 502000, 502500, 503000, 503500, 504000, 504500, 505000, 505500, 506000, 506500, 507000, 507500, 508000, 508500, 509000, 509500, 510000, 510500, 511000, 511500, 512000, 512500, 513000, 513500, 514000, 514500, 515000, 515500, 516000, 516500, 517000, 517500, 518000, 518500, 519000, 519500, 520000, 520500, 521000, 521500, 522000, 522500, 523000, 523500, 524000, 524500, 525000, 525500, 526000, 526500, 527000, 527500, 528000, 528500, 529000, 529500, 530000, 530500, 531000, 531500, 532000, 532500, 533000, 533500, 534000, 534500, 535000, 535500, 536000, 536500, 537000, 537500, 538000, 538500, 539000, 539500, 540000, 540500, 541000, 541500, 542000, 542500, 543000, 543500, 544000, 544500, 545000, 545500, 546000, 546500, 547000, 547500, 548000, 548500, 549000, 549500, 550000, 550500, 551000, 551500, 552000, 552500, 553000, 553500, 554000, 554500, 555000, 555500, 556000, 556500, 557000, 557500, 558000, 558500, 559000, 559500, 560000, 560500, 561000, 561500, 562000, 562500, 563000, 563500, 564000, 564500, 565000, 565500, 566000, 566500, 567000, 567500, 568000, 568500, 569000, 569500, 570000, 570500, 571000, 571500, 572000, 572500, 573000, 573500, 574000, 574500, 575000, 575500, 576000, 576500, 577000, 577500, 578000, 578500, 579000, 579500, 580000, 580500, 581000, 581500, 582000, 582500, 583000, 583500, 584000, 584500, 585000, 585500, 586000, 586500, 587000, 587500, 588000, 588500, 589000, 589500, 590000, 590500, 591000, 591500, 592000, 592500, 593000, 593500, 594000, 594500, 595000, 595500, 596000, 596500, 597000, 597500, 598000, 598500, 599000, 599500, 600000, 600500, 601000, 601500, 602000, 602500, 603000, 603500, 604000, 604500, 605000, 605500, 606000, 606500, 607000, 607500, 608000, 608500, 609000, 609500, 610000, 610500, 611000, 611500, 612000, 612500, 613000, 613500, 614000, 614500, 615000, 615500, 616000, 616500, 617000, 617500, 618000, 618500, 619000, 619500, 620000, 620500, 621000, 621500, 622000, 622500, 623000, 623500, 624000, 624500, 625000, 625500, 626000, 626500, 627000, 627500, 628000, 628500, 629000, 629500, 630000,

TABLE 1.

Initial Dates of Hindu Months.

THE YEAR DIVIDED BY 4 LEAVES REMAINDER 1.

| add days | Vais. | Jyai. | Āsh. | Śrāv. | Bhādr. | Āśvi. | Kārtt. | Mārg. | Paush. | Māgh. | Phālg. | Chaitr. | add days |
|-------------|---------|---------|---------|----------|----------|---------|----------|---------|---------|---------|---------|---------|-------------|
| | 18 Mar. | 17 Apr. | 19 May. | 19 June. | 21 July. | 21 Aug. | 20 Sept. | 20 Oct. | 19 Nov. | 18 Dec. | 17 Jan. | 15 Feb. | |
| 1 | 489 | 381 | 449 | 381 | 441 | 437 | 385 | 397 | 453 | 413 | 505 | 413 | 1 |
| 2 | 605 | 497 | 565 | 497 | 557 | 553 | 501 | 513 | 569 | 529 | 621 | 529 | 2 |
| 3 | 721 | 613 | 681 | 613 | 673 | 669 | 617 | 629 | 685 | 645 | 737 | 655 | 3 |
| 4 | 837 | 729 | 797 | 725 | 789 | 785 | 733 | 741 | 801 | 761 | 853 | 761 | 4 |
| 5 | 949 | 845 | 913 | 841 | 905 | 901 | 845 | 857 | 913 | 873 | 965 | 873 | 5 |
| 6 | 1065 | 957 | 1029 | 957 | 1017 | 1013 | 961 | 973 | 1029 | 989 | 1081 | 989 | 6 |
| 7 | 1181 | 1073 | 1141 | 1073 | 1133 | 1129 | 1067 | 1089 | 1145 | 1105 | 1197 | 1105 | 7 |
| 8 | 1297 | 1189 | 1257 | 1189 | 1249 | 1245 | 1183 | 1205 | 1261 | 1221 | 1313 | 1223 | 8 |
| 9 | 1413 | 1305 | 1373 | 1301 | 1365 | 1361 | 1309 | 1317 | 1377 | 1337 | 1429 | 1333 | 9 |
| 10 | 1525 | 1421 | 1489 | 1417 | 1481 | 1477 | 1421 | 1433 | 1489 | 1449 | 1541 | 1449 | 10 |
| 11 | 1641 | 1533 | 1605 | 1533 | 1593 | 1589 | 1537 | 1549 | 1605 | 1565 | 1657 | 1565 | 11 |
| 12 | 1757 | 1649 | 1717 | 1649 | 1719 | 1705 | 1653 | 1665 | 1721 | 1681 | 1773 | 1681 | 12 |
| 13 | 1873 | 1765 | 1833 | 1765 | 1825 | 1821 | 1769 | 1781 | 1837 | 1797 | 1885 | 1797 | 13 |

TABLE 2.

Initial Dates of Hindu Months.

THE YEAR DIVIDED BY 4 LEAVES REMAINDER 2.

| add days | Vais. | Jyai. | Āsh. | Śrāv. | Bhādr. | Āśvi. | Kārtt. | Mārg. | Paush. | Māgh. | Phālg. | Chaitr. | add days |
|-------------|---------|---------|---------|----------|----------|---------|----------|---------|---------|---------|---------|---------|-------------|
| | 18 Mar. | 17 Apr. | 19 May. | 19 June. | 21 July. | 21 Aug. | 20 Sept. | 20 Oct. | 19 Nov. | 18 Dec. | 17 Jan. | 15 Feb. | |
| 1 | 462 | 354 | 422 | 354 | 414 | 410 | 358 | 366 | 426 | 386 | 478 | 386 | 1 |
| 2 | 574 | 470 | 538 | 466 | 530 | 526 | 470 | 482 | 538 | 498 | 591 | 498 | 2 |
| 3 | 690 | 586 | 654 | 582 | 642 | 638 | 586 | 598 | 654 | 614 | 706 | 614 | 3 |
| 4 | 806 | 698 | 770 | 698 | 758 | 754 | 702 | 714 | 770 | 730 | 822 | 730 | 4 |
| 5 | 922 | 814 | 882 | 814 | 874 | 870 | 818 | 830 | 886 | 846 | 938 | 846 | 5 |
| 6 | 1038 | 930 | 998 | 930 | 990 | 986 | 934 | 942 | 1002 | 962 | 1054 | 962 | 6 |
| 7 | 1150 | 1046 | 1114 | 1042 | 1106 | 1102 | 1046 | 1058 | 1114 | 1074 | 1170 | 1074 | 7 |
| 8 | 1266 | 1162 | 1230 | 1158 | 1218 | 1214 | 1162 | 1174 | 1230 | 1190 | 1282 | 1190 | 8 |
| 9 | 1382 | 1274 | 1346 | 1274 | 1334 | 1330 | 1278 | 1290 | 1346 | 1306 | 1398 | 1306 | 9 |
| 10 | 1498 | 1390 | 1458 | 1390 | 1450 | 1446 | 1394 | 1406 | 1462 | 1422 | 1514 | 1422 | 10 |
| 11 | 1614 | 1506 | 1574 | 1506 | 1566 | 1562 | 1510 | 1518 | 1578 | 1538 | 1630 | 1538 | 11 |
| 12 | 1726 | 1622 | 1690 | 1618 | 1682 | 1678 | 1626 | 1634 | 1690 | 1650 | 1746 | 1650 | 12 |
| 13 | 1842 | 1738 | 1806 | 1734 | 1794 | 1790 | 1738 | 1750 | 1806 | 1766 | 1858 | 1766 | 13 |

TABLE 3.

Initial Dates of Hindu Months.

THE YEAR DIVIDED BY 4 LEAVES REMAINDER 3.

| | Vais. | Jyai. | Āsh. | Śrāv. | Bhādr. | Āsvi. | Kārtt. | Mārg. | Paush. | Māgh. | Phālg. | Chaitr. | add days |
|----|---------|---------|---------|----------|----------|---------|----------|---------|---------|---------|---------|---------|-------------|
| | 19 Mar. | 18 Apr. | 20 May. | 20 June. | 22 July. | 22 Aug. | 21 Sept. | 21 Oct. | 20 Nov. | 19 Dec. | 17 Jan. | 15 Feb. | |
| 1 | 547 | 439 | 507 | 439 | 499 | 495 | 443 | 455 | 511 | 471 | 447 | 355 | 1 |
| 2 | 663 | 555 | 623 | 555 | 615 | 611 | 559 | 571 | 627 | 587 | 563 | 471 | 2 |
| 3 | 779 | 671 | 739 | 667 | 731 | 727 | 675 | 683 | 743 | 703 | 679 | 587 | 3 |
| 4 | 891 | 787 | 855 | 783 | 847 | 843 | 787 | 799 | 855 | 815 | 795 | 703 | 4 |
| 5 | 1007 | 899 | 971 | 899 | 959 | 955 | 903 | 915 | 971 | 931 | 911 | 815 | 5 |
| 6 | 1123 | 1015 | 1083 | 1015 | 1075 | 1071 | 1019 | 1031 | 1087 | 1047 | 1022 | 931 | 6 |
| 7 | 1239 | 1131 | 1199 | 1131 | 1191 | 1187 | 1135 | 1147 | 1203 | 1163 | 1139 | 1047 | 7 |
| 8 | 1355 | 1247 | 1315 | 1243 | 1307 | 1303 | 1251 | 1259 | 1319 | 1279 | 1255 | 1163 | 8 |
| 9 | 1467 | 1363 | 1431 | 1359 | 1423 | 1419 | 1363 | 1375 | 1431 | 1391 | 1371 | 1279 | 9 |
| 10 | 1583 | 1475 | 1547 | 1475 | 1535 | 1531 | 1479 | 1491 | 1547 | 1507 | 1487 | 1391 | 10 |
| 11 | 1699 | 1591 | 1659 | 1591 | 1651 | 1647 | 1595 | 1607 | 1663 | 1623 | 1599 | 1507 | 11 |
| 12 | 1815 | 1707 | 1775 | 1707 | 1767 | 1763 | 1711 | 1723 | 1779 | 1739 | 1715 | 1623 | 12 |
| 13 | 1931 | 1823 | 1891 | 1819 | 1883 | 1879 | 1827 | 1839 | 1895 | 1855 | 1831 | 1739 | 13 |

TABLE 4.

Initial Dates of Hindu Months.

LEAP-YEARS.

| | Vais. | Jyai. | Āsh. | Śrāv. | Bhādr. | Āsvi. | Kārtt. | Mārg. | Paush. | Māgh. | Phālg. | Chaitr. | add days |
|----|---------|---------|---------|----------|----------|---------|----------|---------|---------|---------|---------|---------|-------------|
| | 18 Mar. | 17 Apr. | 19 May. | 19 June. | 21 July. | 21 Aug. | 20 Sept. | 20 Oct. | 19 Nov. | 18 Dec. | 18 Jan. | 16 Feb. | |
| 1 | 520 | 412 | 480 | 408 | 472 | 468 | 416 | 424 | 484 | 444 | 536 | 440 | 1 |
| 2 | 632 | 523 | 596 | 524 | 588 | 580 | 528 | 540 | 596 | 556 | 648 | 556 | 2 |
| 3 | 748 | 640 | 712 | 640 | 700 | 696 | 644 | 656 | 712 | 672 | 764 | 672 | 3 |
| 4 | 864 | 756 | 824 | 756 | 816 | 812 | 764 | 772 | 828 | 788 | 880 | 788 | 4 |
| 5 | 980 | 872 | 940 | 872 | 932 | 928 | 876 | 888 | 944 | 904 | 996 | 904 | 5 |
| 6 | 1092 | 983 | 1056 | 984 | 1048 | 1044 | 992 | 1000 | 1060 | 1020 | 1112 | 1016 | 6 |
| 7 | 1208 | 1104 | 1172 | 1100 | 1164 | 1156 | 1104 | 1116 | 1172 | 1132 | 1224 | 1132 | 7 |
| 8 | 1324 | 1216 | 1288 | 1216 | 1276 | 1272 | 1220 | 1232 | 1288 | 1248 | 1340 | 1248 | 8 |
| 9 | 1440 | 1332 | 1400 | 1332 | 1392 | 1388 | 1336 | 1348 | 1404 | 1364 | 1456 | 1364 | 9 |
| 10 | 1556 | 1448 | 1516 | 1448 | 1508 | 1504 | 1452 | 1464 | 1520 | 1480 | 1572 | 1480 | 10 |
| 11 | 1668 | 1564 | 1632 | 1564 | 1624 | 1620 | 1568 | 1576 | 1630 | 1596 | 1688 | 1592 | 11 |
| 12 | 1784 | 1680 | 1748 | 1676 | 1740 | 1732 | 1680 | 1692 | 1748 | 1708 | 1800 | 1708 | 12 |
| 13 | 1900 | 1792 | 1864 | 1792 | 1852 | 1848 | 1796 | 1808 | 1864 | 1824 | 1916 | 1824 | 13 |

TABLE 5.

Years of the 19th Century A.D.

| Years. | w | a | b | c | d | Years. | w | a | b | c | d |
|--------|---|------|-----|---|-----|--------|---|------|-----|---|-----|
| 1801 | 5 | 5138 | 566 | 6 | 479 | 1851 | 4 | 9234 | 323 | 3 | 851 |
| 1802 | 6 | 8738 | 813 | 5 | 585 | L 1852 | 5 | 2835 | 570 | 2 | 957 |
| 1803 | 7 | 2349 | 59 | 4 | 691 | 1853 | 7 | 6775 | 852 | 4 | 69 |
| L 1804 | 1 | 5940 | 306 | 4 | 797 | 1854 | 1 | 375 | 99 | 4 | 175 |
| 1805 | 3 | 9380 | 588 | 6 | 909 | 1855 | 2 | 3975 | 345 | 3 | 281 |
| 1806 | 4 | 3480 | 835 | 5 | 15 | L 1856 | 3 | 7576 | 592 | 2 | 387 |
| 1807 | 5 | 7080 | 81 | 4 | 121 | 1857 | 5 | 1516 | 874 | 4 | 499 |
| L 1808 | 6 | 681 | 328 | 4 | 227 | 1858 | 6 | 5116 | 121 | 4 | 605 |
| 1809 | 1 | 4621 | 610 | 6 | 339 | 1859 | 7 | 8717 | 367 | 3 | 711 |
| 1810 | 2 | 8221 | 857 | 5 | 445 | L 1860 | 1 | 2317 | 614 | 2 | 817 |
| 1811 | 3 | 1822 | 103 | 4 | 551 | 1861 | 3 | 6257 | 896 | 4 | 929 |
| L 1812 | 4 | 5422 | 350 | 3 | 657 | 1862 | 4 | 9857 | 143 | 4 | 35 |
| 1813 | 6 | 9362 | 632 | 5 | 769 | 1863 | 5 | 3458 | 389 | 3 | 141 |
| 1814 | 7 | 2962 | 879 | 5 | 875 | L 1864 | 6 | 7058 | 636 | 2 | 247 |
| 1815 | 1 | 6563 | 125 | 4 | 981 | 1865 | 1 | 998 | 918 | 4 | 359 |
| L 1816 | 2 | 163 | 372 | 3 | 87 | 1866 | 2 | 4598 | 165 | 3 | 465 |
| 1817 | 4 | 4103 | 654 | 5 | 199 | 1867 | 3 | 8199 | 411 | 3 | 571 |
| 1818 | 5 | 7703 | 901 | 5 | 305 | L 1868 | 4 | 1800 | 658 | 2 | 677 |
| 1819 | 6 | 1394 | 147 | 4 | 411 | 1869 | 6 | 5740 | 940 | 4 | 789 |
| L 1820 | 7 | 4905 | 394 | 3 | 517 | 1870 | 7 | 9340 | 187 | 3 | 895 |
| 1821 | 2 | 8845 | 676 | 5 | 629 | 1871 | 1 | 2940 | 433 | 3 | 1 |
| 1822 | 3 | 2445 | 923 | 5 | 735 | L 1872 | 2 | 6541 | 680 | 2 | 107 |
| 1823 | 4 | 6045 | 169 | 4 | 841 | 1873 | 4 | 481 | 962 | 4 | 219 |
| L 1824 | 5 | 9646 | 416 | 3 | 947 | 1874 | 5 | 4081 | 209 | 3 | 325 |
| 1825 | 7 | 3586 | 698 | 5 | 59 | 1875 | 6 | 7682 | 455 | 2 | 431 |
| 1826 | 1 | 7186 | 945 | 4 | 165 | L 1876 | 7 | 1282 | 702 | 2 | 537 |
| 1827 | 2 | 787 | 191 | 4 | 271 | 1877 | 2 | 5222 | 984 | 4 | 649 |
| L 1828 | 3 | 4387 | 438 | 3 | 377 | 1878 | 3 | 8822 | 231 | 3 | 755 |
| 1829 | 5 | 8327 | 720 | 5 | 489 | 1879 | 4 | 2423 | 477 | 2 | 861 |
| 1830 | 6 | 1927 | 967 | 4 | 595 | L 1880 | 5 | 6023 | 724 | 2 | 967 |
| 1831 | 7 | 5528 | 213 | 4 | 701 | 1881 | 7 | 9963 | 6 | 4 | 79 |
| L 1832 | 1 | 9128 | 460 | 3 | 807 | 1882 | 1 | 3563 | 253 | 3 | 185 |
| 1833 | 3 | 3068 | 742 | 5 | 919 | 1883 | 2 | 7164 | 499 | 2 | 291 |
| 1834 | 4 | 6663 | 939 | 4 | 25 | L 1884 | 3 | 765 | 746 | 2 | 397 |
| 1835 | 5 | 269 | 235 | 4 | 131 | 1885 | 5 | 4705 | 28 | 4 | 509 |
| L 1836 | 6 | 3870 | 482 | 3 | 237 | 1886 | 6 | 8305 | 275 | 3 | 615 |
| 1837 | 1 | 7809 | 764 | 5 | 349 | 1887 | 7 | 1905 | 521 | 2 | 721 |
| 1838 | 2 | 1410 | 11 | 4 | 455 | L 1888 | 1 | 5506 | 768 | 1 | 827 |
| 1839 | 3 | 5010 | 257 | 3 | 561 | 1889 | 3 | 9446 | 50 | 3 | 939 |
| L 1840 | 4 | 8611 | 504 | 3 | 667 | 1890 | 4 | 3046 | 297 | 3 | 15 |
| 1841 | 6 | 2551 | 786 | 5 | 779 | 1891 | 5 | 6647 | 343 | 2 | 151 |
| 1842 | 7 | 6151 | 33 | 4 | 885 | L 1892 | 6 | 247 | 790 | 1 | 257 |
| 1843 | 1 | 9751 | 279 | 3 | 991 | 1893 | 1 | 4187 | 72 | 3 | 369 |
| L 1844 | 2 | 3332 | 326 | 3 | 97 | 1894 | 2 | 7787 | 319 | 3 | 475 |
| 1845 | 4 | 7292 | 808 | 5 | 209 | 1895 | 3 | 1388 | 565 | 2 | 581 |
| 1846 | 5 | 892 | 55 | 4 | 315 | L 1896 | 4 | 4988 | 812 | 1 | 687 |
| 1847 | 6 | 4493 | 301 | 3 | 421 | 1897 | 6 | 8928 | 94 | 3 | 799 |
| L 1848 | 7 | 8093 | 548 | 3 | 527 | 1898 | 7 | 2528 | 341 | 3 | 905 |
| 1849 | 2 | 2033 | 830 | 5 | 639 | 1899 | 1 | 6129 | 587 | 2 | 11 |
| 1850 | 3 | 5633 | 77 | 4 | 745 | L 1900 | 2 | 9730 | 834 | 1 | 117 |

TABLE 6.

Centuries intervening between the given year and the
corresponding one of the 19th Century.

| Century. | w | a | b | c | d |
|----------|---|------|-----|----|-----|
| 15 | 6 | 6094 | 185 | 69 | 823 |
| 14 | 5 | 4626 | 734 | 67 | 573 |
| 13 | 4 | 3157 | 284 | 64 | 322 |
| 12 | 3 | 1688 | 834 | 62 | 73 |
| 11 | 2 | 220 | 384 | 59 | 823 |
| 10 | 1 | 8751 | 934 | 57 | 572 |
| 9 | 7 | 7282 | 484 | 55 | 322 |
| 8 | 6 | 5813 | 35 | 52 | 71 |
| 7 | 5 | 4345 | 585 | 50 | 822 |
| 6 | 4 | 2876 | 135 | 47 | 572 |
| 5 | 3 | 1407 | 685 | 45 | 321 |
| 4 | 2 | 9939 | 235 | 43 | 71 |
| J. 3 | 1 | 8470 | 785 | 40 | 820 |
| G. 2 | 4 | 3615 | 972 | 11 | 512 |
| G. 1 | 2 | 1808 | 486 | 5 | 256 |

NB —Centuries 1 and 2 yield the date in the New Style; the other Centuries in the Old Style.

Equations for converting Hindu years into years A. D.

Kaliyuga-Samvat; — 3101. Vikrama-Samvat; — 56. Śaka-Samvat; + 78.

These equations give the commencement, A. D., of the *expired* Hindu year, *i.e.*, more properly, of the current year next after the expired year for which the equation is applied.

TABLE 7.

| JANUARY. | | | | | | | FEBRUARY. | | | | | | | MARCH. | | | | | | |
|----------|------------|---|------|------|-----|-----|-----------|------------|---|------|------|-----|-----|---------|------------|---|------|-----|-----|-----|
| Common. | Leap year. | w | a | b | c | d | Common. | Leap year. | w | a | b | c | d | Common. | Leap year. | w | a | b | c | d |
| day | | | | | | | day. | | | | | | | day. | | | | | | |
| 1 | 1 | 0 | ... | ... | ... | ... | 1 | 1 | 3 | 498 | 125 | 85 | 179 | 1 | ... | 3 | 9979 | 141 | 162 | 340 |
| 2 | 2 | 1 | 339 | 36 | 3 | 6 | 2 | 2 | 4 | 836 | 161 | 88 | 185 | 2 | 1 | 4 | 318 | 177 | 181 | 346 |
| 3 | 3 | 2 | 677 | 73 | 5 | 12 | 3 | 3 | 5 | 1175 | 198 | 90 | 190 | 3 | 2 | 5 | 657 | 214 | 167 | 352 |
| 4 | 4 | 3 | 1016 | 109 | 8 | 17 | 4 | 4 | 6 | 1513 | 234 | 93 | 196 | 4 | 3 | 6 | 995 | 250 | 170 | 358 |
| 5 | 5 | 4 | 1355 | 145 | 11 | 23 | 5 | 5 | 0 | 1852 | 270 | 96 | 202 | 5 | 4 | 0 | 1334 | 286 | 172 | 364 |
| 6 | 6 | 5 | 1693 | 181 | 14 | 29 | 6 | 6 | 1 | 2191 | 306 | 99 | 208 | 6 | 5 | 1 | 1672 | 323 | 175 | 369 |
| 7 | 7 | 6 | 2032 | 218 | 16 | 35 | 7 | 7 | 2 | 2529 | 343 | 101 | 213 | 7 | 6 | 2 | 2011 | 359 | 178 | 375 |
| 8 | 8 | 0 | 2370 | 254 | 19 | 40 | 8 | 8 | 3 | 2868 | 379 | 104 | 219 | 8 | 7 | 3 | 2350 | 395 | 181 | 381 |
| 9 | 9 | 1 | 2709 | 290 | 22 | 46 | 9 | 9 | 4 | 3207 | 415 | 107 | 225 | 9 | 8 | 4 | 2688 | 432 | 183 | 387 |
| 10 | 10 | 2 | 3048 | 327 | 25 | 52 | 10 | 10 | 5 | 3545 | 452 | 110 | 231 | 10 | 9 | 5 | 3027 | 468 | 186 | 392 |
| 11 | 11 | 3 | 3386 | 363 | 27 | 58 | 11 | 11 | 6 | 3884 | 488 | 112 | 237 | 11 | 10 | 6 | 3366 | 504 | 189 | 398 |
| 12 | 12 | 4 | 3725 | 399 | 30 | 63 | 12 | 12 | 0 | 4243 | 524 | 115 | 242 | 12 | 11 | 0 | 3704 | 540 | 192 | 404 |
| 13 | 13 | 5 | 4064 | 436 | 33 | 69 | 13 | 13 | 1 | 4561 | 561 | 118 | 248 | 13 | 12 | 1 | 4043 | 577 | 194 | 410 |
| 14 | 14 | 6 | 4402 | 472 | 36 | 75 | 14 | 14 | 2 | 4900 | 597 | 120 | 254 | 14 | 13 | 2 | 4382 | 613 | 197 | 415 |
| 15 | 15 | 0 | 4741 | 508 | 38 | 81 | 15 | 15 | 3 | 5238 | 633 | 123 | 260 | 15 | 14 | 3 | 4720 | 649 | 200 | 421 |
| 16 | 16 | 1 | 5079 | 544 | 41 | 87 | 16 | 16 | 4 | 5577 | 669 | 126 | 265 | 16 | 15 | 4 | 5059 | 686 | 203 | 427 |
| 17 | 17 | 2 | 5418 | 581 | 44 | 92 | 17 | 17 | 5 | 5916 | 706 | 129 | 271 | 17 | 16 | 5 | 5397 | 722 | 205 | 433 |
| 18 | 18 | 3 | 5757 | 617 | 47 | 98 | 18 | 18 | 6 | 6254 | 742 | 131 | 277 | 18 | 17 | 6 | 5736 | 758 | 208 | 439 |
| 19 | 19 | 4 | 6095 | 653 | 49 | 104 | 19 | 19 | 0 | 6593 | 778 | 134 | 283 | 19 | 18 | 0 | 6075 | 794 | 211 | 444 |
| 20 | 20 | 5 | 6434 | 690 | 52 | 110 | 20 | 20 | 1 | 6932 | 815 | 137 | 288 | 20 | 19 | 1 | 6413 | 831 | 214 | 450 |
| 21 | 21 | 6 | 6773 | 726 | 55 | 115 | 21 | 21 | 2 | 7270 | 851 | 140 | 294 | 21 | 20 | 2 | 6752 | 867 | 216 | 456 |
| 22 | 22 | 0 | 7111 | 762 | 57 | 121 | 22 | 22 | 3 | 7609 | 887 | 142 | 300 | 22 | 21 | 3 | 7091 | 903 | 219 | 462 |
| 23 | 23 | 1 | 7450 | 798 | 60 | 127 | 23 | 23 | 4 | 7947 | 923 | 145 | 306 | 23 | 22 | 4 | 7429 | 940 | 222 | 467 |
| 24 | 24 | 2 | 7789 | 835 | 63 | 133 | 24 | 24 | 5 | 8286 | 960 | 148 | 312 | 24 | 23 | 5 | 7768 | 976 | 224 | 473 |
| 25 | 25 | 3 | 8127 | 871 | 66 | 138 | 25 | 25 | 6 | 8625 | 996 | 151 | 317 | 25 | 24 | 6 | 8106 | 12 | 227 | 479 |
| 26 | 26 | 4 | 8466 | 907 | 68 | 144 | 26 | 26 | 0 | 8963 | 1032 | 153 | 323 | 26 | 25 | 0 | 8445 | 48 | 230 | 485 |
| 27 | 27 | 5 | 8804 | 944 | 71 | 150 | 27 | 27 | 1 | 9302 | 1069 | 156 | 329 | 27 | 26 | 1 | 8784 | 85 | 233 | 490 |
| 28 | 28 | 6 | 9143 | 980 | 74 | 156 | 28 | 28 | 2 | 9641 | 1105 | 159 | 335 | 28 | 27 | 2 | 9122 | 121 | 235 | 496 |
| 29 | 29 | 0 | 9482 | 1016 | 77 | 162 | ... | 29 | 3 | 9979 | 1141 | 162 | 340 | 29 | 28 | 3 | 9461 | 157 | 238 | 502 |
| 30 | 30 | 1 | 9820 | 1052 | 79 | 167 | | | | | | | | 30 | 29 | 4 | 9800 | 194 | 241 | 508 |
| 31 | 31 | 2 | 159 | 89 | 82 | 173 | | | | | | | | 31 | 30 | 5 | 138 | 230 | 244 | 514 |
| | | | | | | | | | | | | | | ... | 31 | 6 | 477 | 266 | 246 | 519 |

1 Phālguna c. about 114

Kumbha-samkrānti.

1 Chaitra c. about 136

Mina-samkrānti.

1 Vaisākha c. about 279

Mā-ha-samkrānti.

m. : 1 = Sunday, 2 = Monday, 3 = Tuesday, 4 = Wednesday, 5 = Thursday, 6 = Friday, 7 or 0 = Saturday.

TABLE 7—continued.

| APRIL. | | | | | | | MAY. | | | | | | | JUNE. | | | | | | |
|---------|------------|---|-------|------|-----|-----|---------|------------|---|-------|------|-----|-----|---------|------------|---|-------|------|-----|------|
| Common. | Leap year. | w | a | b | c | d | Common. | Leap year. | w | a | b | c | d | Common. | Leap year. | w | a | b | c | d |
| day. | | | | | | | day. | | | | | | | day. | | | | | | |
| 1 | ... | 6 | 477 | 266 | 246 | 519 | 1 | ... | 1 | 636 | 355 | 329 | 692 | 1 | ... | 4 | 1133 | 480 | 413 | 871 |
| 2 | 1 | 0 | 816 | 303 | 249 | 525 | 2 | 1 | 2 | 974 | 391 | 331 | 698 | 2 | 1 | 5 | 1472 | 516 | 416 | 877 |
| 3 | 2 | 1 | 1154 | 339 | 252 | 531 | 3 | 2 | 3 | 1313 | 428 | 334 | 704 | 3 | 2 | 6 | 1811 | 553 | 419 | 883 |
| 4 | 3 | 2 | 1493 | 375 | 255 | 537 | 4 | 3 | 4 | 1652 | 464 | 337 | 710 | 4 | 3 | 0 | 2149 | 589 | 422 | 889 |
| 5 | 4 | 3 | 1831 | 411 | 257 | 542 | 5 | 4 | 5 | 1990 | 500 | 339 | 715 | 5 | 4 | 1 | 2488 | 625 | 424 | 894 |
| 6 | 5 | 4 | 2170 | 448 | 260 | 548 | 6 | 5 | 6 | 2329 | 536 | 342 | 721 | 6 | 5 | 2 | 2827 | 661 | 427 | 900 |
| 7 | 6 | 5 | 2509 | 484 | 263 | 554 | 7 | 6 | 0 | 2668 | 573 | 345 | 727 | 7 | 6 | 3 | 3165 | 698 | 430 | 906 |
| 8 | 7 | 6 | 2847 | 520 | 266 | 560 | 8 | 7 | 1 | 3006 | 609 | 348 | 733 | 8 | 7 | 4 | 3504 | 734 | 433 | 912 |
| 9 | 8 | 0 | 3186 | 557 | 268 | 565 | 9 | 8 | 2 | 3345 | 645 | 350 | 739 | 9 | 8 | 5 | 3842 | 770 | 435 | 917 |
| 10 | 9 | 1 | 3525 | 593 | 271 | 571 | 10 | 9 | 3 | 3684 | 682 | 353 | 744 | 10 | 9 | 6 | 4181 | 807 | 438 | 923 |
| 11 | 10 | 2 | 3863 | 629 | 274 | 577 | 11 | 10 | 4 | 4022 | 718 | 356 | 750 | 11 | 10 | 0 | 4520 | 843 | 441 | 929 |
| 12 | 11 | 3 | 4202 | 665 | 277 | 583 | 12 | 11 | 5 | 4361 | 754 | 359 | 756 | 12 | 11 | 1 | 4858 | 879 | 444 | 935 |
| 13 | 12 | 4 | 4540 | 702 | 279 | 589 | 13 | 12 | 6 | 4699 | 790 | 361 | 762 | 13 | 12 | 2 | 5197 | 916 | 446 | 941 |
| 14 | 13 | 5 | 4879 | 738 | 282 | 594 | 14 | 13 | 0 | 5038 | 827 | 364 | 767 | 14 | 13 | 3 | 5536 | 952 | 449 | 946 |
| 15 | 14 | 6 | 5218 | 774 | 285 | 600 | 15 | 14 | 1 | 5377 | 863 | 367 | 773 | 15 | 14 | 4 | 5874 | 988 | 452 | 952 |
| 16 | 15 | 0 | 5556 | 811 | 287 | 606 | 16 | 15 | 2 | 5715 | 899 | 370 | 779 | 16 | 15 | 5 | 6213 | 1024 | 454 | 958 |
| 17 | 16 | 1 | 5895 | 847 | 290 | 612 | 17 | 16 | 3 | 6054 | 936 | 372 | 785 | 17 | 16 | 6 | 6552 | 1060 | 457 | 964 |
| 18 | 17 | 2 | 6234 | 883 | 293 | 617 | 18 | 17 | 4 | 6393 | 972 | 375 | 790 | 18 | 17 | 0 | 6890 | 1096 | 460 | 969 |
| 19 | 18 | 3 | 6572 | 919 | 296 | 623 | 19 | 18 | 5 | 6731 | 1008 | 378 | 796 | 19 | 18 | 1 | 7229 | 1132 | 463 | 975 |
| 20 | 19 | 4 | 6911 | 956 | 298 | 629 | 20 | 19 | 6 | 7070 | 1045 | 381 | 802 | 20 | 19 | 2 | 7567 | 1168 | 465 | 981 |
| 21 | 20 | 5 | 7250 | 992 | 301 | 635 | 21 | 20 | 0 | 7408 | 1081 | 383 | 808 | 21 | 20 | 3 | 7966 | 1204 | 468 | 987 |
| 22 | 21 | 6 | 7588 | 1028 | 304 | 640 | 22 | 21 | 1 | 7747 | 1117 | 386 | 814 | 22 | 21 | 4 | 8245 | 1240 | 471 | 992 |
| 23 | 22 | 0 | 7927 | 1065 | 307 | 646 | 23 | 22 | 2 | 8086 | 1153 | 389 | 819 | 23 | 22 | 5 | 8583 | 1276 | 474 | 998 |
| 24 | 23 | 1 | 8265 | 1101 | 309 | 652 | 24 | 23 | 3 | 8424 | 1190 | 391 | 825 | 24 | 23 | 6 | 8922 | 1312 | 476 | 1004 |
| 25 | 24 | 2 | 8604 | 1137 | 312 | 658 | 25 | 24 | 4 | 8763 | 1226 | 394 | 831 | 25 | 24 | 0 | 9261 | 1348 | 479 | 1010 |
| 26 | 25 | 3 | 8943 | 1174 | 315 | 664 | 26 | 25 | 5 | 9102 | 1262 | 397 | 837 | 26 | 25 | 1 | 9599 | 1384 | 482 | 1016 |
| 27 | 26 | 4 | 9281 | 1210 | 318 | 669 | 27 | 26 | 6 | 9440 | 1299 | 400 | 842 | 27 | 26 | 2 | 9938 | 1420 | 485 | 1022 |
| 28 | 27 | 5 | 9620 | 1246 | 320 | 675 | 28 | 27 | 0 | 9779 | 1335 | 402 | 848 | 28 | 27 | 3 | 10276 | 1456 | 487 | 1028 |
| 29 | 28 | 6 | 9959 | 1282 | 323 | 681 | 29 | 28 | 1 | 10118 | 1371 | 405 | 854 | 29 | 28 | 4 | 10615 | 1492 | 490 | 1034 |
| 30 | 29 | 0 | 10297 | 1319 | 326 | 687 | 30 | 29 | 2 | 10456 | 1407 | 408 | 860 | 30 | 29 | 5 | 10954 | 1528 | 493 | 1040 |
| ... | 30 | 1 | 10636 | 1355 | 329 | 692 | 31 | 30 | 3 | 10795 | 1444 | 411 | 865 | ... | 30 | 6 | 11292 | 1564 | 496 | 1046 |
| | | | | | | | ... | 31 | 4 | 11133 | 1480 | 413 | 871 | | | | | | | |

1 Jyāishtha c. about 351

8 Vṛ̥sha-saṁkrānti

1 Āshāḍha c. about 459

II Mithuna-saṁkrānti.

1 Śrāvaṇa c. about 556

⊕ Karkata-saṁkrānti.

w ; 1 = Sunday, 2 = Monday, 3 = Tuesday, 4 = Wednesday, 5 = Thursday, 6 = Friday, 7 or 0 = Saturday

TABLE 7—continued.

| JULY. | | | | | | | AUGUST. | | | | | | | SEPTEMBER. | | | | | | |
|---------|------------|------|-----|-----|-----|---|---------|------------|------|-----|-----|-----|---|------------|------------|------|-----|-----|-----|---|
| Common. | Leap year. | w | a | b | c | d | Common. | Leap year. | w | a | b | c | d | Common. | Leap year. | w | a | b | c | d |
| day. | | | | | | | day. | | | | | | | day. | | | | | | |
| 1 ... | 6 | 1292 | 569 | 496 | 44 | | 1 ... | 2 | 1790 | 694 | 580 | 223 | | 1 ... | 5 | 2288 | 819 | 665 | 402 | |
| 2 1 | 0 | 1631 | 605 | 493 | 50 | | 2 1 | 3 | 2129 | 720 | 583 | 229 | | 2 1 | 6 | 2626 | 855 | 668 | 403 | |
| 3 2 | 1 | 1970 | 641 | 501 | 56 | | 3 2 | 4 | 2467 | 756 | 586 | 235 | | 3 2 | 0 | 2965 | 891 | 671 | 414 | |
| 4 3 | 2 | 2308 | 678 | 504 | 62 | | 4 3 | 5 | 2806 | 503 | 589 | 241 | | 4 3 | 1 | 3303 | 928 | 673 | 419 | |
| 5 4 | 3 | 2647 | 714 | 506 | 67 | | 5 4 | 6 | 3144 | 539 | 591 | 246 | | 5 4 | 2 | 3642 | 964 | 676 | 425 | |
| 6 5 | 4 | 2986 | 750 | 509 | 73 | | 6 5 | 0 | 3483 | 575 | 594 | 252 | | 6 5 | 3 | 3981 | 0 | 679 | 431 | |
| 7 6 | 5 | 3324 | 787 | 512 | 79 | | 7 6 | 1 | 3822 | 912 | 597 | 258 | | 7 6 | 4 | 4319 | 37 | 682 | 437 | |
| 8 7 | 6 | 3663 | 823 | 515 | 85 | | 8 7 | 2 | 4160 | 943 | 600 | 264 | | 8 7 | 5 | 4658 | 73 | 684 | 442 | |
| 9 8 | 0 | 4001 | 859 | 517 | 91 | | 9 8 | 3 | 4499 | 981 | 602 | 269 | | 9 8 | 6 | 4997 | 109 | 687 | 448 | |
| 10 9 | 1 | 4340 | 895 | 520 | 96 | | 10 9 | 4 | 4838 | 20 | 605 | 275 | | 10 9 | 0 | 5335 | 145 | 690 | 454 | |
| 11 10 | 2 | 4679 | 932 | 523 | 102 | | 11 10 | 5 | 5176 | 57 | 608 | 281 | | 11 10 | 1 | 5674 | 182 | 693 | 460 | |
| 12 11 | 3 | 5017 | 968 | 526 | 108 | | 12 11 | 6 | 5515 | 93 | 611 | 287 | | 12 11 | 2 | 6013 | 218 | 695 | 466 | |
| 13 12 | 4 | 5356 | 4 | 528 | 114 | | 13 12 | 0 | 5854 | 126 | 613 | 292 | | 13 12 | 3 | 6351 | 254 | 698 | 471 | |
| 14 13 | 5 | 5695 | 41 | 531 | 119 | | 14 13 | 1 | 6192 | 169 | 616 | 298 | | 14 13 | 4 | 6690 | 291 | 701 | 477 | |
| 15 14 | 6 | 6033 | 77 | 534 | 125 | | 15 14 | 2 | 6531 | 202 | 619 | 304 | | 15 14 | 5 | 7028 | 327 | 704 | 483 | |
| 16 15 | 0 | 6372 | 113 | 537 | 131 | | 16 15 | 3 | 6869 | 238 | 621 | 310 | | 16 15 | 6 | 7367 | 363 | 706 | 489 | |
| 17 16 | 1 | 6710 | 149 | 539 | 137 | | 17 16 | 4 | 7208 | 274 | 624 | 316 | | 17 16 | 0 | 7706 | 400 | 709 | 494 | |
| 18 17 | 2 | 7049 | 186 | 542 | 142 | | 18 17 | 5 | 7547 | 311 | 627 | 321 | | 18 17 | 1 | 8044 | 436 | 712 | 500 | |
| 19 18 | 3 | 7388 | 222 | 545 | 148 | | 19 18 | 6 | 7885 | 347 | 630 | 327 | | 19 18 | 2 | 8383 | 472 | 715 | 506 | |
| 20 19 | 4 | 7726 | 258 | 548 | 154 | | 20 19 | 0 | 8224 | 383 | 632 | 333 | | 20 19 | 3 | 8722 | 508 | 717 | 512 | |
| 21 20 | 5 | 8065 | 295 | 550 | 160 | | 21 20 | 1 | 8563 | 420 | 635 | 339 | | 21 20 | 4 | 9060 | 545 | 720 | 518 | |
| 22 21 | 6 | 8404 | 331 | 553 | 166 | | 22 21 | 2 | 8901 | 456 | 638 | 344 | | 22 21 | 5 | 9399 | 581 | 723 | 523 | |
| 23 22 | 0 | 8742 | 367 | 556 | 171 | | 23 22 | 3 | 9240 | 492 | 641 | 350 | | 23 22 | 6 | 9737 | 617 | 726 | 529 | |
| 24 23 | 1 | 9081 | 403 | 559 | 177 | | 24 23 | 4 | 9578 | 529 | 643 | 356 | | 24 23 | 0 | 76 | 654 | 728 | 535 | |
| 25 24 | 2 | 9420 | 440 | 561 | 183 | | 25 24 | 5 | 9917 | 565 | 646 | 362 | | 25 24 | 1 | 415 | 690 | 731 | 541 | |
| 26 25 | 3 | 9758 | 476 | 564 | 189 | | 26 25 | 6 | 256 | 601 | 649 | 367 | | 26 25 | 2 | 753 | 726 | 734 | 546 | |
| 27 26 | 4 | 97 | 512 | 567 | 194 | | 27 26 | 0 | 594 | 637 | 652 | 373 | | 27 26 | 3 | 1092 | 762 | 736 | 552 | |
| 28 27 | 5 | 435 | 549 | 569 | 200 | | 28 27 | 1 | 933 | 674 | 654 | 379 | | 28 27 | 4 | 1431 | 799 | 739 | 558 | |
| 29 28 | 6 | 774 | 585 | 572 | 206 | | 29 28 | 2 | 1272 | 710 | 657 | 385 | | 29 28 | 5 | 1769 | 835 | 742 | 564 | |
| 30 29 | 0 | 1113 | 621 | 575 | 212 | | 30 29 | 3 | 1610 | 746 | 660 | 391 | | 30 29 | 6 | 2108 | 871 | 745 | 569 | |
| 31 30 | 1 | 1451 | 658 | 578 | 217 | | 31 30 | 4 | 1949 | 783 | 663 | 396 | | ... 30 | 0 | 2447 | 908 | 747 | 575 | |
| ... 31 | 2 | 1790 | 694 | 580 | 223 | | ... 31 | 5 | 2288 | 819 | 665 | 402 | | | | | | | | |

1 Bhādrapada c. about 622

Q Simha-samkrānti

1 = Sunday, 2 = Monday, 3 = Tuesday, 4 = Wednesday, 5 = Thursday, 6 = Friday, 7 or 0 = Saturday.

1 Āśvina c. about 708

M Kanya-samkrānti.

1 Kārttika c. about 791

△ Tula-samkrānti.

TABLE 7—continued.

| OCTOBER. | | | | | | | NOVEMBER. | | | | | | | DECEMBER. | | | | | | |
|----------|------------|---|------|-----|-----|-----|-----------|------------|---|------|-----|-----|-----|-----------|------------|---|------|-----|-----|-----|
| Common. | Leap year. | w | a | b | c | d | Common. | Leap year. | w | a | b | c | d | Common. | Leap year. | w | a | b | c | d |
| day. | | | | | | | day. | | | | | | | day. | | | | | | |
| 1 | ... | 0 | 2447 | 908 | 747 | 575 | 1 | ... | 3 | 2941 | 33 | 832 | 754 | 1 | ... | 5 | 3103 | 121 | 914 | 927 |
| 2 | 1 | 1 | 2785 | 944 | 759 | 581 | 2 | 1 | 4 | 3283 | 69 | 835 | 760 | 2 | 1 | 6 | 3412 | 158 | 917 | 933 |
| 3 | 2 | 2 | 3124 | 980 | 753 | 587 | 3 | 2 | 5 | 3621 | 105 | 838 | 766 | 3 | 2 | 0 | 3780 | 194 | 920 | 939 |
| 4 | 3 | 3 | 3462 | 16 | 756 | 593 | 4 | 3 | 6 | 3960 | 142 | 840 | 771 | 4 | 3 | 1 | 4119 | 230 | 923 | 944 |
| 5 | 4 | 4 | 3801 | 53 | 758 | 598 | 5 | 4 | 0 | 4299 | 178 | 843 | 777 | 5 | 4 | 2 | 4458 | 267 | 925 | 950 |
| 6 | 5 | 5 | 4140 | 89 | 761 | 604 | 6 | 5 | 1 | 4637 | 214 | 846 | 783 | 6 | 5 | 3 | 4796 | 303 | 928 | 956 |
| 7 | 6 | 6 | 4478 | 125 | 764 | 610 | 7 | 6 | 2 | 4976 | 250 | 849 | 789 | 7 | 6 | 4 | 5135 | 339 | 931 | 962 |
| 8 | 7 | 0 | 4817 | 162 | 767 | 616 | 8 | 7 | 3 | 5315 | 287 | 851 | 794 | 8 | 7 | 5 | 5473 | 375 | 934 | 968 |
| 9 | 8 | 1 | 5156 | 198 | 769 | 621 | 9 | 8 | 4 | 5653 | 323 | 854 | 800 | 9 | 8 | 6 | 5812 | 412 | 936 | 973 |
| 10 | 9 | 2 | 5494 | 234 | 772 | 627 | 10 | 9 | 5 | 5992 | 359 | 857 | 806 | 10 | 9 | 0 | 6151 | 448 | 939 | 979 |
| 11 | 10 | 3 | 5833 | 271 | 775 | 633 | 11 | 10 | 6 | 6330 | 396 | 860 | 812 | 11 | 10 | 1 | 6489 | 484 | 942 | 985 |
| 12 | 11 | 4 | 6171 | 307 | 778 | 639 | 12 | 11 | 0 | 6669 | 432 | 862 | 818 | 12 | 11 | 2 | 6828 | 521 | 945 | 991 |
| 13 | 12 | 5 | 6510 | 343 | 780 | 644 | 13 | 12 | 1 | 7008 | 468 | 865 | 823 | 13 | 12 | 3 | 7167 | 557 | 947 | 996 |
| 14 | 13 | 6 | 6849 | 379 | 783 | 650 | 14 | 13 | 2 | 7346 | 504 | 868 | 829 | 14 | 13 | 4 | 7505 | 593 | 950 | 2 |
| 15 | 14 | 0 | 7187 | 416 | 786 | 656 | 15 | 14 | 3 | 7685 | 541 | 871 | 835 | 15 | 14 | 5 | 7844 | 629 | 953 | 8 |
| 16 | 15 | 1 | 7526 | 452 | 788 | 662 | 16 | 15 | 4 | 8024 | 577 | 873 | 841 | 16 | 15 | 6 | 8183 | 666 | 955 | 14 |
| 17 | 16 | 2 | 7865 | 488 | 791 | 668 | 17 | 16 | 5 | 8362 | 613 | 876 | 846 | 17 | 16 | 0 | 8521 | 702 | 958 | 19 |
| 18 | 17 | 3 | 8203 | 525 | 794 | 673 | 18 | 17 | 6 | 8701 | 650 | 879 | 852 | 18 | 17 | 1 | 8860 | 738 | 961 | 25 |
| 19 | 18 | 4 | 8542 | 561 | 797 | 679 | 19 | 18 | 0 | 9039 | 686 | 882 | 858 | 19 | 18 | 2 | 9198 | 775 | 964 | 31 |
| 20 | 19 | 5 | 8881 | 597 | 799 | 685 | 20 | 19 | 1 | 9378 | 722 | 884 | 864 | 20 | 19 | 3 | 9537 | 811 | 966 | 37 |
| 21 | 20 | 6 | 9219 | 633 | 802 | 691 | 21 | 20 | 2 | 9717 | 758 | 887 | 869 | 21 | 20 | 4 | 9876 | 847 | 969 | 43 |
| 22 | 21 | 0 | 9558 | 670 | 805 | 696 | 22 | 21 | 3 | 55 | 795 | 890 | 875 | 22 | 21 | 5 | 214 | 884 | 972 | 48 |
| 23 | 22 | 1 | 9896 | 706 | 808 | 702 | 23 | 22 | 4 | 394 | 831 | 893 | 881 | 23 | 22 | 6 | 553 | 920 | 975 | 54 |
| 24 | 23 | 2 | 235 | 742 | 810 | 705 | 24 | 23 | 5 | 733 | 867 | 895 | 887 | 24 | 23 | 0 | 892 | 956 | 977 | 60 |
| 25 | 24 | 3 | 571 | 779 | 813 | 714 | 25 | 24 | 6 | 1071 | 904 | 898 | 893 | 25 | 24 | 1 | 1230 | 992 | 980 | 66 |
| 26 | 25 | 4 | 912 | 815 | 816 | 719 | 26 | 25 | 0 | 1410 | 940 | 901 | 898 | 26 | 25 | 2 | 1569 | 29 | 983 | 71 |
| 27 | 26 | 5 | 1251 | 851 | 819 | 725 | 27 | 26 | 1 | 1749 | 976 | 903 | 901 | 27 | 26 | 3 | 1907 | 65 | 986 | 77 |
| 28 | 27 | 6 | 1590 | 887 | 821 | 731 | 28 | 27 | 2 | 2087 | 13 | 906 | 910 | 28 | 27 | 4 | 2246 | 101 | 988 | 83 |
| 29 | 28 | 0 | 1928 | 924 | 824 | 737 | 29 | 28 | 3 | 2426 | 49 | 909 | 916 | 29 | 28 | 5 | 2585 | 138 | 991 | 89 |
| 30 | 29 | 1 | 2267 | 960 | 827 | 743 | 30 | 29 | 4 | 2761 | 85 | 912 | 921 | 30 | 29 | 6 | 2923 | 174 | 994 | 95 |
| 31 | 30 | 2 | 2605 | 996 | 830 | 748 | ... | 30 | 5 | 3103 | 121 | 914 | 927 | 31 | 30 | 0 | 3262 | 210 | 997 | 100 |
| ... | 31 | 3 | 2944 | 33 | 832 | 754 | | | | | | | | ... | 31 | 1 | 3601 | 246 | 999 | 106 |

1 Margashira about 372

m̐ Vpishika-samkrānti.

1 Pausa about 954

† Dhanu-samkrānti.

1 Māgha about 34

‡ Makara-samkrānti.

w, 1 = Sunday, 2 = Monday, 3 = Tuesday, 4 = Wednesday, 5 = Thursday, 6 = Friday, 7 or 0 = Saturday

TABLE 7—continued.

| JANUARY OF THE YEAR CONTINUED | | | | | | | FEBRUARY OF THE YEAR CONTINUED. | | | | | | | MARCH OF THE YEAR CONTINUED. | | | | | | |
|-------------------------------|--------------------------|---|-------|------|-----|-----|---------------------------------|--------------------------|---|------|-----|-----|-----|------------------------------|---------------|---|-------|------|-----|-----|
| Preced. y. common. | Preced. y. leap y. | w | a | b | c | d | Preced. y. common. | Preced. y. leap y. | w | a | b | c | d | Years 2, 3, 4 | Years 5, 6, 7 | w | a | b | c | d |
| day. | | | | | | | day. | | | | | | | day. | | | | | | |
| 1 | ... | 1 | 3601 | 246 | 999 | 106 | 1 | ... | 4 | 4008 | 371 | 84 | 285 | 1 | ... | 4 | 3580 | 387 | 161 | 141 |
| 2 | 1 | 2 | 3939 | 283 | 2 | 112 | 2 | 1 | 5 | 4437 | 408 | 87 | 296 | 2 | 1 | 5 | 3918 | 423 | 163 | 451 |
| 3 | 2 | 3 | 4278 | 319 | 4 | 118 | 3 | 2 | 6 | 4776 | 444 | 89 | 296 | 3 | 2 | 6 | 4257 | 460 | 166 | 457 |
| 4 | 3 | 4 | 4617 | 355 | 7 | 123 | 4 | 3 | 0 | 5111 | 480 | 91 | 302 | 4 | 3 | 0 | 4593 | 496 | 169 | 461 |
| 5 | 4 | 5 | 4955 | 391 | 10 | 129 | 5 | 4 | 1 | 5453 | 517 | 93 | 308 | 5 | 4 | 1 | 4934 | 533 | 171 | 465 |
| 6 | 5 | 6 | 5294 | 428 | 13 | 135 | 6 | 5 | 2 | 5791 | 553 | 95 | 313 | 6 | 5 | 2 | 5273 | 569 | 174 | 473 |
| 7 | 6 | 0 | 5632 | 464 | 15 | 141 | 7 | 6 | 3 | 6130 | 589 | 100 | 319 | 7 | 6 | 3 | 5612 | 605 | 177 | 481 |
| 8 | 7 | 1 | 5971 | 500 | 18 | 146 | 8 | 7 | 4 | 6469 | 625 | 103 | 325 | 8 | 7 | 4 | 5950 | 642 | 180 | 487 |
| 9 | 8 | 2 | 6310 | 537 | 21 | 152 | 9 | 8 | 5 | 6807 | 662 | 106 | 331 | 9 | 8 | 5 | 6289 | 678 | 182 | 491 |
| 10 | 9 | 3 | 6648 | 573 | 24 | 158 | 10 | 9 | 6 | 7146 | 698 | 109 | 337 | 10 | 9 | 6 | 6628 | 714 | 185 | 498 |
| 11 | 10 | 4 | 6987 | 609 | 26 | 164 | 11 | 10 | 0 | 7485 | 734 | 111 | 342 | 11 | 10 | 0 | 6966 | 751 | 188 | 504 |
| 12 | 11 | 5 | 7326 | 645 | 29 | 169 | 12 | 11 | 1 | 7823 | 771 | 114 | 348 | 12 | 11 | 1 | 7305 | 787 | 191 | 510 |
| 13 | 12 | 6 | 7664 | 682 | 32 | 175 | 13 | 12 | 2 | 8162 | 807 | 117 | 354 | 13 | 12 | 2 | 7644 | 823 | 193 | 515 |
| 14 | 13 | 0 | 8003 | 718 | 35 | 181 | 14 | 13 | 3 | 8500 | 843 | 119 | 360 | 14 | 13 | 3 | 7982 | 859 | 196 | 521 |
| 15 | 14 | 1 | 8341 | 754 | 37 | 187 | 15 | 14 | 4 | 8839 | 880 | 122 | 365 | 15 | 14 | 4 | 8321 | 896 | 199 | 527 |
| 16 | 15 | 2 | 8680 | 791 | 40 | 192 | 16 | 15 | 5 | 9178 | 916 | 125 | 371 | 16 | 15 | 5 | 8659 | 932 | 202 | 533 |
| 17 | 16 | 3 | 9019 | 827 | 43 | 198 | 17 | 16 | 6 | 9516 | 952 | 128 | 377 | 17 | 16 | 6 | 8998 | 968 | 204 | 539 |
| 18 | 17 | 4 | 9357 | 863 | 46 | 204 | 18 | 17 | 0 | 9855 | 988 | 130 | 383 | 18 | 17 | 0 | 9337 | 1005 | 207 | 544 |
| 19 | 18 | 5 | 9696 | 900 | 48 | 210 | 19 | 18 | 1 | 101 | 25 | 133 | 388 | 19 | 18 | 1 | 9675 | 1041 | 210 | 550 |
| 20 | 19 | 6 | 10035 | 936 | 51 | 217 | 20 | 19 | 2 | 532 | 61 | 136 | 394 | 20 | 19 | 2 | 10014 | 1077 | 213 | 556 |
| 21 | 20 | 0 | 10373 | 972 | 54 | 221 | 21 | 20 | 3 | 871 | 97 | 139 | 400 | 21 | 20 | 3 | 10353 | 1113 | 215 | 562 |
| 22 | 21 | 1 | 10712 | 1009 | 56 | 227 | 22 | 21 | 4 | 1209 | 134 | 141 | 406 | 22 | 21 | 4 | 10691 | 1150 | 218 | 567 |
| 23 | 22 | 2 | 11051 | 1045 | 59 | 233 | 23 | 22 | 5 | 1548 | 170 | 144 | 412 | 23 | 22 | 5 | 11030 | 1186 | 221 | 573 |
| 24 | 23 | 3 | 11390 | 1081 | 62 | 238 | 24 | 23 | 6 | 1887 | 206 | 147 | 417 | 24 | 23 | 6 | 11368 | 1222 | 223 | 579 |
| 25 | 24 | 4 | 11728 | 1117 | 65 | 244 | 25 | 24 | 0 | 2225 | 242 | 150 | 423 | 25 | 24 | 0 | 11707 | 1259 | 226 | 585 |
| 26 | 25 | 5 | 12067 | 1154 | 67 | 250 | 26 | 25 | 1 | 2564 | 279 | 152 | 429 | 26 | 25 | 1 | 12046 | 1295 | 229 | 590 |
| 27 | 26 | 6 | 12405 | 1190 | 70 | 256 | 27 | 26 | 2 | 2903 | 315 | 155 | 435 | 27 | 26 | 2 | 12384 | 1331 | 232 | 596 |
| 28 | 27 | 0 | 12744 | 1226 | 73 | 262 | 28 | 27 | 3 | 3241 | 351 | 158 | 440 | 28 | 27 | 3 | 12723 | 1367 | 234 | 602 |
| 29 | 28 | 1 | 13082 | 1263 | 76 | 267 | 29 | 28 | 4 | 3580 | 388 | 161 | 446 | 29 | 28 | 4 | 13062 | 1404 | 237 | 608 |
| 30 | 29 | 2 | 13421 | 1299 | 78 | 273 | | | | | | | | 30 | 29 | 5 | 13400 | 1440 | 240 | 614 |
| 31 | 30 | 3 | 13760 | 1335 | 81 | 279 | | | | | | | | 31 | 30 | 6 | 13739 | 1476 | 243 | 619 |
| ... | 31 | 4 | 14098 | 1371 | 84 | 285 | | | | | | | | ... | 31 | 0 | 14078 | 1512 | 245 | 625 |

1 Phālguna c. about 114

1 Chaitra c. about 196

1 Vaisākha c. about 279

Kumbha-samkrānti

Mina-samkrānti

Mēsha-samkrānti.

Note.—Divide the Christian year in which the date falls by 4; the Remainder shows which Index applies.

TABLE 8.

Hours and Minutes.

| Hours. | a | b | c | d | Minutes | a | b | c | d | Minutes | a | b | c | d |
|--------|-----|----|---|---|---------|---|---|---|---|---------|----|---|---|---|
| 1 | 14 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 31 | 7 | 1 | 0 | 0 |
| 2 | 28 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 32 | 8 | 1 | 0 | 0 |
| 3 | 42 | 5 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 33 | 8 | 1 | 0 | 0 |
| 4 | 56 | 6 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 34 | 8 | 1 | 0 | 0 |
| 5 | 71 | 8 | 1 | 1 | 5 | 1 | 0 | 0 | 0 | 35 | 8 | 1 | 0 | 0 |
| 6 | 85 | 9 | 1 | 1 | 6 | 1 | 0 | 0 | 0 | 36 | 8 | 1 | 0 | 0 |
| 7 | 99 | 11 | 1 | 2 | 7 | 2 | 0 | 0 | 0 | 37 | 9 | 1 | 0 | 0 |
| 8 | 113 | 12 | 1 | 2 | 8 | 2 | 0 | 0 | 0 | 38 | 9 | 1 | 0 | 0 |
| 9 | 127 | 14 | 1 | 2 | 9 | 2 | 0 | 0 | 0 | 39 | 9 | 1 | 0 | 0 |
| 10 | 141 | 15 | 1 | 2 | 10 | 2 | 0 | 0 | 0 | 40 | 9 | 1 | 0 | 0 |
| 11 | 155 | 17 | 1 | 3 | 11 | 3 | 0 | 0 | 0 | 41 | 10 | 1 | 0 | 0 |
| 12 | 169 | 18 | 1 | 3 | 12 | 3 | 0 | 0 | 0 | 42 | 10 | 1 | 0 | 0 |
| 13 | 183 | 20 | 1 | 3 | 13 | 3 | 0 | 0 | 0 | 43 | 10 | 1 | 0 | 0 |
| 14 | 198 | 21 | 2 | 3 | 14 | 3 | 0 | 0 | 0 | 44 | 10 | 1 | 0 | 0 |
| 15 | 212 | 23 | 2 | 4 | 15 | 4 | 0 | 0 | 0 | 45 | 11 | 1 | 0 | 0 |
| 16 | 226 | 24 | 2 | 4 | 16 | 4 | 0 | 0 | 0 | 46 | 11 | 1 | 0 | 0 |
| 17 | 240 | 26 | 2 | 4 | 17 | 4 | 0 | 0 | 0 | 47 | 11 | 1 | 0 | 0 |
| 18 | 254 | 27 | 2 | 4 | 18 | 4 | 0 | 0 | 0 | 48 | 11 | 1 | 0 | 0 |
| 19 | 268 | 29 | 2 | 5 | 19 | 4 | 0 | 0 | 0 | 49 | 12 | 1 | 0 | 0 |
| 20 | 282 | 30 | 2 | 5 | 20 | 5 | 1 | 0 | 0 | 50 | 12 | 1 | 0 | 0 |
| 21 | 296 | 32 | 2 | 5 | 21 | 5 | 1 | 0 | 0 | 51 | 12 | 1 | 0 | 0 |
| 22 | 310 | 33 | 3 | 5 | 22 | 5 | 1 | 0 | 0 | 52 | 12 | 1 | 0 | 0 |
| 23 | 325 | 35 | 3 | 6 | 23 | 5 | 1 | 0 | 0 | 53 | 12 | 1 | 0 | 0 |
| 24 | 339 | 36 | 3 | 6 | 24 | 6 | 1 | 0 | 0 | 54 | 13 | 1 | 0 | 0 |
| | | | | | 25 | 6 | 1 | 0 | 0 | 55 | 13 | 1 | 0 | 0 |
| | | | | | 26 | 6 | 1 | 0 | 0 | 56 | 13 | 1 | 0 | 0 |
| | | | | | 27 | 6 | 1 | 0 | 0 | 57 | 13 | 1 | 0 | 0 |
| | | | | | 28 | 7 | 1 | 0 | 0 | 58 | 14 | 1 | 0 | 0 |
| | | | | | 29 | 7 | 1 | 0 | 0 | 59 | 14 | 1 | 0 | 0 |
| | | | | | 30 | 7 | 1 | 0 | 0 | 60 | 14 | 2 | 0 | 0 |

TABLE 9.

Argument b.

| Arg. | Equ. | Arg. | Equ. | Arg. | Equ. | Arg. | Equ. |
|------|------|------|------|------|------|------|------|
| 0 | 140 | 250 | 280 | 500 | 140 | 750 | 0 |
| 10 | 149 | 260 | 280 | 510 | 131 | 760 | 9 |
| 20 | 155 | 270 | 279 | 520 | 122 | 770 | 1 |
| 30 | 166 | 280 | 277 | 530 | 114 | 780 | 3 |
| 40 | 175 | 290 | 276 | 540 | 105 | 790 | 4 |
| 50 | 184 | 300 | 273 | 550 | 96 | 800 | 7 |
| 60 | 192 | 310 | 270 | 560 | 88 | 810 | 10 |
| 70 | 200 | 320 | 267 | 570 | 80 | 820 | 13 |
| 80 | 208 | 330 | 263 | 580 | 72 | 830 | 17 |
| 90 | 215 | 340 | 258 | 590 | 65 | 840 | 22 |
| 100 | 223 | 350 | 253 | 600 | 57 | 850 | 27 |
| 110 | 230 | 360 | 248 | 610 | 50 | 860 | 32 |
| 120 | 236 | 370 | 242 | 620 | 44 | 870 | 38 |
| 130 | 242 | 380 | 236 | 630 | 38 | 880 | 44 |
| 140 | 248 | 390 | 230 | 640 | 32 | 890 | 50 |
| 150 | 253 | 400 | 223 | 650 | 27 | 900 | 57 |
| 160 | 258 | 410 | 215 | 660 | 22 | 910 | 65 |
| 170 | 263 | 420 | 208 | 670 | 17 | 920 | 72 |
| 180 | 267 | 430 | 200 | 680 | 13 | 930 | 80 |
| 190 | 270 | 440 | 192 | 690 | 10 | 940 | 88 |
| 200 | 273 | 450 | 184 | 700 | 7 | 950 | 96 |
| 210 | 276 | 460 | 175 | 710 | 4 | 960 | 105 |
| 220 | 277 | 470 | 166 | 720 | 3 | 970 | 114 |
| 230 | 279 | 480 | 158 | 730 | 1 | 980 | 122 |
| 240 | 280 | 490 | 149 | 740 | 0 | 990 | 131 |
| | | | | | | 1000 | 140 |

TABLE 10.

Argument c.

| Arg. | Eq. | Arg. | Eq. | Arg. | Eq. | Arg. | Eq. |
|------|-----|------|-----|------|-----|------|-----|
| 5 | 60 | 250 | 0 | 500 | 60 | 750 | 121 |
| 10 | 57 | 260 | 0 | 510 | 61 | 760 | 121 |
| 20 | 53 | 270 | 0 | 520 | 68 | 770 | 120 |
| 30 | 49 | 280 | 1 | 530 | 72 | 780 | 12 |
| 40 | 45 | 290 | 2 | 540 | 76 | 790 | 119 |
| 50 | 41 | 300 | 3 | 550 | 79 | 800 | 117 |
| 60 | 38 | 310 | 4 | 560 | 83 | 810 | 117 |
| 70 | 34 | 320 | 6 | 570 | 86 | 820 | 115 |
| 80 | 31 | 330 | 7 | 580 | 90 | 830 | 113 |
| 90 | 28 | 340 | 9 | 590 | 93 | 840 | 112 |
| 100 | 25 | 350 | 11 | 600 | 96 | 850 | 109 |
| 110 | 22 | 360 | 14 | 610 | 99 | 860 | 107 |
| 120 | 19 | 370 | 16 | 620 | 102 | 870 | 105 |
| 130 | 16 | 380 | 19 | 630 | 105 | 880 | 102 |
| 140 | 14 | 390 | 22 | 640 | 107 | 890 | 99 |
| 150 | 11 | 400 | 25 | 650 | 109 | 900 | 96 |
| 160 | 9 | 410 | 28 | 660 | 112 | 910 | 93 |
| 170 | 7 | 420 | 31 | 670 | 113 | 920 | 90 |
| 180 | 6 | 430 | 34 | 680 | 115 | 930 | 86 |
| 190 | 4 | 440 | 38 | 690 | 117 | 940 | 83 |
| 200 | 3 | 450 | 41 | 700 | 118 | 950 | 79 |
| 210 | 2 | 460 | 45 | 710 | 119 | 960 | 76 |
| 220 | 1 | 470 | 49 | 720 | 120 | 970 | 72 |
| 230 | 0 | 480 | 53 | 730 | 120 | 980 | 68 |
| 240 | 0 | 490 | 57 | 740 | 121 | 990 | 64 |
| 250 | 0 | 500 | 60 | 750 | 121 | 1000 | 60 |

TABLE 11.

Differences.

| Arg. Δ | H. M. | Arg. Δ | H. M. | Arg. Δ | H. M. |
|-----------|-------|-----------|-------|-----------|-------|
| 1 | 0. 4 | 36 | 2.33 | 71 | 5. 2 |
| 2 | 0. 9 | 37 | 2.37 | 72 | 5. 6 |
| 3 | 0.13 | 38 | 2.42 | 73 | 5.10 |
| 4 | 0.17 | 39 | 2.46 | 74 | 5.15 |
| 5 | 0.21 | 40 | 2.50 | 75 | 5.19 |
| 6 | 0.26 | 41 | 2.54 | 76 | 5.23 |
| 7 | 0.30 | 42 | 2.59 | 77 | 5.27 |
| 8 | 0.34 | 43 | 3. 3 | 78 | 5.32 |
| 9 | 0.38 | 44 | 3. 7 | 79 | 5.36 |
| 10 | 0.43 | 45 | 3.11 | 80 | 5.40 |
| 11 | 0.47 | 46 | 3.16 | 81 | 5.44 |
| 12 | 0.51 | 47 | 3.20 | 82 | 5.49 |
| 13 | 0.55 | 48 | 3.24 | 83 | 5.53 |
| 14 | 1. 0 | 49 | 3.28 | 84 | 5.57 |
| 15 | 1. 4 | 50 | 3.33 | 85 | 6. 1 |
| 16 | 1. 8 | 51 | 3.37 | 86 | 6. 6 |
| 17 | 1.12 | 52 | 3.41 | 87 | 6.10 |
| 18 | 1.17 | 53 | 3.45 | 88 | 6.14 |
| 19 | 1.21 | 54 | 3.50 | 89 | 6.18 |
| 20 | 1.25 | 55 | 3.54 | 90 | 6.23 |
| 21 | 1.29 | 56 | 3.58 | 91 | 6.27 |
| 22 | 1.34 | 57 | 4. 2 | 92 | 6.31 |
| 23 | 1.38 | 58 | 4. 7 | 93 | 6.35 |
| 24 | 1.42 | 59 | 4.11 | 94 | 6.40 |
| 25 | 1.46 | 60 | 4.15 | 95 | 6.44 |
| 26 | 1.51 | 61 | 4.19 | 96 | 6.48 |
| 27 | 1.55 | 62 | 4.24 | 97 | 6.52 |
| 28 | 1.59 | 63 | 4.28 | 98 | 6.57 |
| 29 | 2. 3 | 64 | 4.32 | 99 | 7. 1 |
| 30 | 2. 8 | 65 | 4.36 | 100 | 7. 5 |
| 31 | 2.12 | 66 | 4.41 | | |
| 32 | 2.16 | 67 | 4.45 | 260 | 4.10 |
| 33 | 2.20 | 68 | 4.49 | | |
| 34 | 2.25 | 69 | 4.53 | 300 | 21.16 |
| 35 | 2.29 | 70 | 4.55 | | |

TABLE 12.—Subsidiary.

Correspondence of Dominical Letters and Week-Days.

| | | | | | | | |
|---|----------|-----------|-----------|------------|----------|-----------|-----------|
| a | S | Mo | Tu | W | Th | Fr | Sat |
| b | Mo | Tu | W | Th | Fr | Sat | S |
| c | Tu | W | Th | Fr | Sat | S | Mo |
| d | W | Th | Fr | Sat | S | Mo | Tu |
| e | Th | Fr | Sat | S | Mo | Tu | W |
| f | Fr | Sat | S | Mo | Tu | W | Th |
| g | Sat | S | Mo | Tu | W | Th | Fr |

S = Ravi, Sûrya-vâra.

Mo = Sôma, Chandra.

Tu = Bhauma, Mangala.

W = Budha.

Th = Guru.

Fr = Śukra.

Sat = Śani.

TABLE 12.

Perpetual Lunar Calendar.

Containing the Epacts and Dominical Letters.

| Mā gha. | | Phālguna. | | Chaitra. | | Vaiśākha. | | Jyāishtha. | | Ā. |
|---------|--------------|------------|--------------|------------|-------------|-------------|-------------|------------|--|-------|
| Days. | | January. | | February. | | March. | | April. | | Days. |
| | Common year. | Leap year. | Common year. | Leap year. | | | | | | |
| 1 | 30 I a | XXIX g | II d | I c | 30 I d | II g | III 18 b | 1 | | |
| 2 | II b | 30 I a | III e | II d | II e | III a | IV 19 c | 2 | | |
| 3 | III c | II b | IV f | III e | III f | IV b | V d | 3 | | |
| 4 | IV d | III c | V g | IV f | IV g | V c | VI e | 4 | | |
| 5 | V e | IV d | VI a | V g | V a | VI d | VII f | 5 | | |
| 6 | VI f | V e | VII b | VI a | VI b | VII e | VIII g | 6 | | |
| 7 | VII g | VI f | VIII c | VII b | VII c | VIII f | IX a | 7 | | |
| 8 | VIII a | VII g | IX d | VIII c | VIII d | IX g | X b | 8 | | |
| 9 | IX b | VIII a | X e | IX d | IX e | X a | XI c | 9 | | |
| 10 | X c | IX b | XI f | X e | X f | XI b | XII d | 10 | | |
| 11 | XI d | X c | XII g | XI f | XI g | XII c | XIII e | 11 | | |
| 12 | XII e | XI d | XIII a | XII g | XII a | XIII d | XIV f | 12 | | |
| 13 | XIII f | XII e | XIV b | XIII a | XIII b | XIV e | XV g | 13 | | |
| 14 | XIV g | XIII f | XV c | XIV b | XIV c | XV f | XVI a | 14 | | |
| 15 | XV a | XIV g | XVI d | XV c | XV d | XVI g | XVII b | 15 | | |
| 16 | XVI b | XV a | XVII e | XVI d | XVI e | XVII a | XVIII c | 16 | | |
| 17 | XVII c | XVI b | XVIII f | XVII e | XVII f | XVIII b | XIX d | 17 | | |
| 18 | XVIII d | XVII c | XIX g | XVIII f | XVIII 4 g | XIX c | XX e | 18 | | |
| 19 | XIX e | XVIII d | XX a | XIX g | XIX 5 a | XX 4 d | XXI f | 19 | | |
| 20 | XX f | XIX e | XXI b | XX a | XX 7 b | XXI 5 e | XXII 1 g | 20 | | |
| 21 | XXI g | XX f | XXII c | XXI b | XXI 8 c | XXII 6 f | XXIII 5 a | 21 | | |
| 22 | XXII a | XXI g | XXIII d | XXII c | XXII 9 d | XXIII 7 g | XXIV 6 b | 22 | | |
| 23 | XXIII b | XXII a | XXIV e | XXIII d | XXIII 10 e | XXIV 8 a | XXV 7 c | 23 | | |
| 24 | XXIV c | XXIII b | XXV f | XXIV e | XXIV 11 f | XXV 10 b | XXVI 8 d | 24 | | |
| 25 | XXV d | XXIV c | XXVI g | XXV f | XXV 12 g | XXVI 11 c | XXVII 9 e | 25 | | |
| 26 | XXVI e | XXV d | XXVII a | XXVI g | XXVI 13 a | XXVII 12 d | XXVIII 10 f | 26 | | |
| 27 | XXVII f | XXVI e | XXVIII b | XXVII a | XXVII 14 b | XXVIII 13 e | XXIX 12 g | 27 | | |
| 28 | XXVIII g | XXVII f | XXIX c | XXVIII b | XXVIII 15 c | XXIX 14 f | XXX 13 a | 28 | | |
| 29 | XXIX a | XXVIII g | ... | XXIX c | XXIX 17 d | 30 I 15 g | I 14 b | 29 | | |
| 30 | XXX b | XXIX a | ... | ... | XXX 18 e | II 16 a | II 15 c | 30 | | |
| 31 | I c | XXX b | ... | ... | I 19 f | ... | III 16 d | 31 | | |

TABLE 12.—Continued.

Perpetual Lunar Calendar.

Containing the *Epacts* and *Dominical Letters*.

| shôjha. | Śrāvapa. | Bhâdrapada. | Āśvina. | Kārttika. | Mārgasīra. | Pau-sha. | Mā- | |
|---------|------------|-------------|------------|------------|------------|-----------|-----------|-------|
| Days. | June. | July. | August. | September. | October. | November. | December. | Days. |
| 1 | IV 17 e | V 16 g | VI 15 c | VIII 15 f | VIII 14 a | X 16 d | X 16 f | 1 |
| 2 | V 18 f | VI 17 a | VII 16 d | IX 16 g | IX 16 b | XI 17 e | XI 17 g | 2 |
| 3 | VI 19 g | VII 18 b | VIII 17 e | X 17 a | X 17 c | XII 18 f | XII 18 a | 3 |
| 4 | VII a | VIII 19 c | IX 18 f | XI 18 b | XI 18 d | XIII 19 g | XIII 19 b | 4 |
| 5 | VIII b | IX d | X g | XII 19 c | XII 19 e | XIV a | XIV c | 5 |
| 6 | IX c | X e | XI a | XIII d | XIII f | XV b | XV d | 6 |
| 7 | X d | XI f | XII b | XIV e | XIV g | XVI c | XVI e | 7 |
| 8 | XI e | XII g | XIII c | XV f | XV a | XVII d | XVII f | 8 |
| 9 | XII f | XIII a | XIV d | XVI g | XVI b | XVIII e | XVIII g | 9 |
| 10 | XIII g | XIV b | XV e | XVII a | XVII c | XIX f | XIX a | 10 |
| 11 | XIV a | XV c | XVI f | XVIII b | XVIII d | XX g | XX b | 11 |
| 12 | XV b | XVI d | XVII g | XIX c | XIX e | XXI a | XXI c | 12 |
| 13 | XVI c | XVII e | XVIII a | XX d | XX f | XXII b | XXII d | 13 |
| 14 | XVII d | XVIII f | XIX b | XXI e | XXI g | XXIII c | XXIII e | 14 |
| 15 | XVIII e | XIX g | XX c | XXII f | XXII a | XXIV d | XXIV f | 15 |
| 16 | XIX f | XX a | XXI d | XXIII g | XXIII b | XXV e | XXV g | 16 |
| 17 | XX g | XXI b | XXII e | XXIV a | XXIV c | XXVI f | XXVI a | 17 |
| 18 | XXI a | XXII c | XXIII f | XXV b | XXV d | XXVII g | XXVII b | 18 |
| 19 | XXII b | XXIII d | XXIV g | XXVI c | XXVI e | XXVIII a | XXVIII c | 19 |
| 20 | XXIII c | XXIV e | XXV a | XXVII d | XXVII f | XXIX b | XXIX d | 20 |
| 21 | XXIV 4 d | XXV f | XXVI b | XXVIII e | XXVIII g | XXX 4 c | 30 I 4 e | 21 |
| 22 | XXV 5 e | XXVI 4 g | XXVII 4 c | XXIX 4 f | XXIX 4 a | I 6 d | II 6 f | 22 |
| 23 | XXVI 6 f | XXVII 5 a | XXVIII 5 d | XXX 5 g | 30 I 5 b | II 7 e | III 7 g | 23 |
| 24 | XXVII 7 g | XXVIII 6 b | XXIX 6 e | I 6 a | II 6 c | III 8 f | IV 8 a | 24 |
| 25 | XXVIII 9 a | XXIX 7 c | 30 I 7 f | II 8 b | III 8 d | IV 9 g | V 9 b | 25 |
| 26 | XXIX 10 b | XXX 8 d | II 8 g | III 9 c | IV 9 e | V 10 a | VI 10 c | 26 |
| 27 | 30 I 11 e | I 9 e | III 9 a | IV 10 d | V 10 f | VI 11 b | VII 11 d | 27 |
| 28 | II 12 d | II 10 f | IV 10 b | V 11 e | VI 11 g | VII 13 c | VIII 12 e | 28 |
| 29 | III 13 e | III 12 g | V 11 c | VI 12 f | VII 12 a | VIII 14 d | IX 13 f | 29 |
| 30 | IV 14 f | IV 13 a | VI 13 d | VII 13 g | VIII 13 b | IX 15 e | X 15 g | 30 |
| 31 | ..... | V 14 b | VII 14 e | ..... | IX 14 c | | XI 16 a | 31 |

TABLE 12.—continued.

Perpetual Lunar Calendar.

Continued for the year following.

| Mā | gha. | Phālguna. | Chaitra. | Vaiśākha. | | Jyai. |
|-------|-----------|-----------|--------------|------------|--------------|------------|
| Days. | January. | February. | March. | April. | | |
| | | | Common year. | Leap year. | Common year. | Leap year. |
| 1 | XII 17 b | XIII e | XII 18 e | XIII 19 f | XIII a | XIV b |
| 2 | XIII 18 c | XIV f | XIII 19 f | XIV g | XIV b | XV c |
| 3 | XIV 19 d | XV g | XIV g | XV a | XV c | XVI d |
| 4 | XV e | XVI a | XV a | XVI b | XVI d | XVII e |
| 5 | XVI f | XVII b | XVI b | XVII c | XVII e | XVIII f |
| 6 | XVII g | XVIII c | XVII c | XVIII d | XVIII f | XIX g |
| 7 | XVIII a | XIX d | XVIII d | XIX e | XIX g | XX a |
| 8 | XIX b | XX e | XIX e | XX f | XX a | XXI b |
| 9 | XX c | XXI f | XX f | XXI g | XXI b | XXII c |
| 10 | XXI d | XXII g | XXI g | XXII a | XXII c | XXIII d |
| 11 | XXII e | XXIII a | XXII a | XXIII b | XXIII d | XXIV e |
| 12 | XXIII f | XXIV b | XXIII b | XXIV c | XXIV e | XXV f |
| 13 | XXIV g | XXV c | XXIV c | XXV d | XXV f | XXVI g |
| 14 | XXV a | XXVI d | XXV d | XXVI e | XXVI g | XXVII a |
| 15 | XXVI b | XXVII e | XXVI e | XXVII f | XXVII a | XXVIII b |
| 16 | XXVII c | XXVIII f | XXVII f | XXVIII g | XXVIII b | XXIX c |
| 17 | XXVIII d | XXIX 4 g | XXVIII g | XXIX a | XXIX c | 30 I d |
| 18 | XXIX 4 c | 30 I 5 a | XXIX a | XXX b | 30 I d | II e |
| 19 | XXX 5 f | II 6 b | XXX b | I c | II e | III f |
| 20 | I 6 g | III 8 c | I c | II d | III f | IV g |
| 21 | II 7 a | IV 9 d | II d | III e | IV g | V a |
| 22 | III 8 b | V 10 e | III e | IV f | V a | VI b |
| 23 | IV 10 c | VI 11 f | IV f | V g | VI b | VII c |
| 24 | V 11 d | VII 12 g | V g | VI a | VII c | VIII d |
| 25 | VI 12 e | VIII 13 a | VI a | VII b | VIII d | IX e |
| 26 | VII 13 f | IX 14 b | VII b | VIII c | IX e | X f |
| 27 | VIII 14 g | X 15 c | VIII c | IX d | X f | XI g |
| 28 | IX 15 a | XI 17 d | IX d | X e | XI g | XII a |
| 29 | X 17 b | XII 18 e | X e | XI f | XII a | XIII b |
| 30 | XI 18 c | ..... | XI f | XII g | XIII b | XIV c |
| 31 | XII 19 d | ..... | XII g | XIII a | ..... | ..... |

TABLE 13.

For finding the date of new-moon in March.

PART THE FIRST.

| I. | II. |
|-----------|----------|
| 0 (+1) | 0 [+0] |
| 304 (+0) | 76 [-4] |
| 608 (-1) | 152 [-3] |
| 912 (-2) | 228 [-2] |
| 1216 (-3) | |
| 1520 (-4) | |
| 1824 (-5) | |

PART THE SECOND.

| y | d | y | d | y | d | y | d |
|----|------------------|----|------------------|----|------------------|----|------------------|
| 0 | 22 $\frac{1}{4}$ | 19 | 23 $\frac{3}{4}$ | 38 | 23 $\frac{1}{4}$ | 57 | 23 |
| 1 | 12 $\frac{1}{4}$ | 20 | 12 | 39 | 12 $\frac{3}{4}$ | 58 | 12 $\frac{1}{4}$ |
| 2 | 31 $\frac{1}{4}$ | 21 | 30 $\frac{3}{4}$ | 40 | 30 $\frac{1}{4}$ | 59 | 31 $\frac{1}{4}$ |
| 3 | 20 $\frac{3}{4}$ | 22 | 20 $\frac{1}{4}$ | 41 | 20 | 60 | 19 $\frac{1}{4}$ |
| 4 | 8 $\frac{1}{4}$ | 23 | 9 $\frac{3}{4}$ | 42 | 9 $\frac{1}{4}$ | 61 | 9 |
| 5 | 27 $\frac{3}{4}$ | 24 | 27 $\frac{1}{4}$ | 43 | 28 $\frac{3}{4}$ | 62 | 27 $\frac{1}{4}$ |
| 6 | 17 $\frac{1}{4}$ | 25 | 16 $\frac{3}{4}$ | 44 | 16 $\frac{1}{4}$ | 63 | 17 $\frac{1}{4}$ |
| 7 | 6 $\frac{3}{4}$ | 26 | 6 $\frac{1}{4}$ | 45 | 6 | 64 | 5 $\frac{3}{4}$ |
| 8 | 24 $\frac{3}{4}$ | 27 | 25 $\frac{1}{4}$ | 46 | 24 $\frac{1}{4}$ | 65 | 24 $\frac{1}{4}$ |
| 9 | 13 $\frac{1}{4}$ | 28 | 13 $\frac{3}{4}$ | 47 | 14 $\frac{1}{4}$ | 66 | 13 $\frac{3}{4}$ |
| 10 | 3 $\frac{1}{4}$ | 29 | 2 $\frac{3}{4}$ | 48 | 2 $\frac{1}{4}$ | 67 | 3 $\frac{1}{4}$ |
| 11 | 22 | 30 | 21 $\frac{3}{4}$ | 49 | 21 $\frac{1}{4}$ | 68 | 21 |
| 12 | 10 $\frac{1}{4}$ | 31 | 11 | 50 | 10 $\frac{3}{4}$ | 69 | 10 $\frac{3}{4}$ |
| 13 | 29 $\frac{1}{4}$ | 32 | 29 | 51 | 29 $\frac{3}{4}$ | 70 | 29 $\frac{1}{4}$ |
| 14 | 18 $\frac{3}{4}$ | 33 | 18 $\frac{1}{4}$ | 52 | 18 | 71 | 18 $\frac{3}{4}$ |
| 15 | 8 | 34 | 7 $\frac{3}{4}$ | 53 | 7 $\frac{1}{4}$ | 72 | 7 |
| 16 | 26 | 35 | 26 $\frac{3}{4}$ | 54 | 26 $\frac{1}{4}$ | 73 | 26 |
| 17 | 15 $\frac{1}{4}$ | 36 | 15 | 55 | 15 $\frac{3}{4}$ | 74 | 15 $\frac{1}{4}$ |
| 18 | 4 $\frac{3}{4}$ | 37 | 4 $\frac{1}{4}$ | 56 | 4 | 75 | 4 $\frac{3}{4}$ |

Example.—To find the day of new-moon in March, A.D. 1468.

| | |
|------------------------|-----------------------------------|
| 1468 | |
| From I | 1216 |
| Remainder..... | 252 (-3) |
| From II..... | 228 (-2) |
| Remainder | 24 (-3 $\frac{1}{4}$) |
| From second part. 24 = | 27 $\frac{3}{4}$ |
| Subtract..... | 3 $\frac{1}{4}$ |
| | <u>23$\frac{3}{4}$</u> |

New-moon: in the last quarter of 23rd March.
Chaitra *su di* 1 on 24th March. Epact XXIV.

TABLE 14.

Tables giving the week-day of the 1st March (Old Style) = d. From A.D. 0 to 2100.

| Centuries | | Years. | | | | | | | | | | | | | | | | | | | | | | | | Centuries | | | | |
|-----------|----|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|----|---|----|----|
| | | (0 to 24.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | | |
| 0 | 7 | 14 | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | 0 | 7 | 14 |
| 1 | 8 | 15 | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | 1 | 8 | 15 |
| 2 | 9 | 16 | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | 2 | 9 | 16 |
| 3 | 10 | 17 | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | 3 | 10 | 17 |
| 4 | 11 | 18 | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | 4 | 11 | 18 |
| 5 | 12 | 19 | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | 5 | 12 | 19 |
| 6 | 13 | 20 | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | 6 | 13 | 20 |

| Centuries. | | Years. | | | | | | | | | | | | | | | | | | | | | | | | Centuries. | | | | |
|------------|----|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------------|----|---|----|----|
| | | (25 to 49.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | | | | |
| 0 | 7 | 14 | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | 0 | 7 | 14 |
| 1 | 8 | 15 | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | 1 | 8 | 15 |
| 2 | 9 | 16 | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | 2 | 9 | 16 |
| 3 | 10 | 17 | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | 3 | 10 | 17 |
| 4 | 11 | 18 | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | 4 | 11 | 18 |
| 5 | 12 | 19 | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | 5 | 12 | 19 |
| 6 | 13 | 20 | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | 6 | 13 | 20 |

| Centuries. | | Years. | | | | | | | | | | | | | | | | | | | | | | | | Centuries. | | | | |
|------------|----|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------------|----|---|----|----|
| | | (50 to 74.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | | | | |
| 0 | 7 | 14 | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | 0 | 7 | 14 |
| 1 | 8 | 15 | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | 1 | 8 | 15 |
| 2 | 9 | 16 | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | 2 | 9 | 16 |
| 3 | 10 | 17 | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | 3 | 10 | 17 |
| 4 | 11 | 18 | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | 4 | 11 | 18 |
| 5 | 12 | 19 | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | 5 | 12 | 19 |
| 6 | 13 | 20 | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | 6 | 13 | 20 |

| Centuries. | | Years. | | | | | | | | | | | | | | | | | | | | | | | | Centuries. | | | | |
|------------|----|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------------|----|----|----|----|
| | | (75 to 99.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | | | | |
| 0 | 7 | 14 | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | 0 | 7 | 14 |
| 1 | 8 | 15 | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | 1 | 8 | 15 |
| 2 | 9 | 16 | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | 2 | 9 | 16 | |
| 3 | 10 | 17 | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | 3 | 10 | 17 |
| 4 | 11 | 18 | Sa | M | Tu | W | Th | Sa | S | M | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | 4 | 11 | 18 | |
| 5 | 12 | 19 | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | M | Tu | W | Th | Sa | S | M | Tu | Th | F | Sa | S | 5 | 12 | 19 |
| 6 | 13 | 20 | Th | Sa | S | M | Tu | Th | F | Sa | S | Tu | W | Th | F | S | M | Tu | W | F | Sa | S | M | W | Th | F | Sa | 6 | 13 | 20 |

TABLE 15.

Longitudes and Latitudes of principal places.

Latitude in degrees and first decimal. Longitude in minutes of time, being the difference in time between Lankâ and the place in question.

| | Lat. | Long. | | | | | |
|----------------------|------|-------|----------------------|------|------|---------------------|-----------|
| | | m. | | | | | |
| Âbâ (Arbuda) | 24.6 | — 12 | Dhulia (Dhulêh) ... | 20.9 | — 4 | Maisûr | 12.3 + 3 |
| Âgrâ | 23.2 | + 16 | Dwâarakâ..... | 22.2 | — 27 | Mâlkhêl (Mânya- | |
| Ahmadâbâd | 43.0 | — 13 | | | | khêta' | 17.2 + 6 |
| Ahmadnagar..... | 19.1 | — 4 | Ellôra (Vêlâpura)... | 20.0 | — 3 | Mânḍavi in Cutch.. | 20.8 — 25 |
| Ajanta | 20.5 | — 0 | | | | Maṅgalûr | 12.9 + 3 |
| Ajmêr | 26.5 | — 4 | Farakhâbâd | 27.4 | + 15 | Mathurâ | 27.5 + 7 |
| Allahâbâd (Prayâga) | 25.4 | + 24 | | | | Mongir or Mungêr | 25.4 + 43 |
| Alligad | 27.9 | + 9 | Gayâ | 24.8 | + 37 | Multân | 30.2 — 17 |
| Amritsar | 31.6 | — 4 | Ghâzipur | 25.4 | + 31 | | |
| Anhilwâd | 23.9 | — 15 | Ginnâr | 21.5 | — 21 | Nâgpur | 21.2 + 13 |
| Arcoî | 12.9 | + 14 | Goa (Gopakapatta- | | | Nâsik | 20.0 — 12 |
| Aurangâbâd | 19.9 | — 2 | na) | 15.5 | — 8 | | |
| | | | Gôrakhpur..... | 26.7 | + 26 | Oudhe (Ayôdhyâ)... | 26.8 + 26 |
| Bâdâmi | 15.9 | — 0 | Gurkhâ | 27.9 | + 34 | | |
| Balagâmi or Bala- | | | Gwâlîor | 26.2 | + 9 | Paithan | 19.4 |
| gâmi | 11.4 | — 2 | | | | Pandharpur | 17.7 — 2 |
| Banawâsi | 14.6 | — 3 | Haidarâbâd (in the | | | Patialâ | 30.3 + 2 |
| Bardhwân | 23.2 | + 48 | Deccan) | 17.4 | + 11 | Pâtna | 25.6 + 37 |
| Baroda (Baḍôda) .. | 22.3 | — 10 | Haidarâbâd (in | | | Poona (Puneh) ... | 18.5 — 8 |
| Bârâi | 18.2 | — 0 | Sindh)..... | 25.4 | — 26 | Purniyâ | 25.8 + 47 |
| Belgaum | 15.9 | — 5 | Hardâ (in Gwâlîor). | 22.3 | + 5 | | |
| Benares | 25.5 | + 29 | Hardwâr | 30.0 | + 9 | Râmêswar..... | 9.3 + 14 |
| Bhâgalpur | 25.3 | + 45 | Hoshangâbâd | 20.8 | + 8 | Ratnâgiri | 17.0 — 10 |
| Bharatpur | 27.2 | + 7 | | | | Rêvâ (Riwâm) | 21.5 + 22 |
| Bhêlsâ | 23.5 | + 8 | Indôr | 20.7 | — 4 | | |
| Bhopâl | 23.3 | + 6 | | | | Śâgar | 23.8 + 12 |
| Bihâr or Behâr | 25.2 | + 39 | Jabalpur..... | 23.2 | + 16 | Salêr-Mahêt (Śrâ- | |
| Bijâpur | 16.8 | — 0 | Jagannâthapuri ... | 19.8 | + 40 | vasti) | 27.5 + 25 |
| Bijnagar or Hampe. | 15.3 | + 3 | Jalgaum..... | 20.4 | — 3 | Sambhalpur | 21.5 + 33 |
| Bikânêr | 28.0 | — 10 | Jaypur | 26.9 | + 0 | Sâtârâ | 17.7 + 7 |
| Bombay | 18.9 | — 12 | Jhânsi..... | 25.5 | + 11 | Seringapatam (Śri- | |
| Broach (Bhṛiguka- | | | Jôdhpur | 26.3 | — 11 | rangapattana) ... | 12.4 + 4 |
| chêbha) | 21.7 | — 11 | Junâgadh | 21.5 | — 21 | Shôlâpur..... | 17.7 + 9 |
| Bundi | 25.5 | — 1 | | | | Sirônj | 24.1 + 8 |
| Burhânpur..... | 21.3 | + 3 | Kalingapatam | 18.3 | + 33 | Sômnâthpâtan | 22.1 — 17 |
| | | | Kalyân in Bombay. | 19.2 | — 11 | Śrînagar in Kâsmîr. | 31.1 — 4 |
| Calcutta..... | 22.6 | + 50 | Kalyân in the Ni- | | | Surat | 21.2 — 12 |
| Cambay or Kham- | | | zan's Dominions. | 17.9 | + 4 | | |
| bhât (Sthambha- | | | Kanauj | 27.0 | + 16 | Taṅjôr..... | 10.8 + 10 |
| vati) | 23.5 | + 8 | Kânêhî, or Conje- | | | Thânâ | 18.2 — 11 |
| Cawnpore-Kânpur .. | 26.5 | + 18 | veram | 12.8 | + 16 | Travancore .. | 8.2 + 5 |
| Cochin | 19.9 | + 2 | Katak..... | 20.5 | + 40 | Trichinopoly..... | 10.8 + 12 |
| | | | Khatmându | 27.2 | + 37 | Trivandram | 8.5 + 4 |
| Dacca Dâkâ) | 23.7 | + 58 | Kolâpur | 16.7 | — 11 | | |
| Dehli | 28.6 | + 6 | | | | Udêpur or Oodêy- | |
| Dêvagiri or Daulat- | | | Lâhôr | 31.6 | + 6 | pur..... | 21.6 — 8 |
| âbâd..... | 20.0 | — 2 | Lekhnau | 26.9 | — 20 | Ujjain..... | 23.2 + 6 |
| Dhârâ | 22.6 | — 2 | | | | Umarâvati or Am- | |
| Dhârâwâd | 15.5 | — 3 | Madhurâ..... | 9.9 | + 9 | râoti | 20.9 + 8 |
| Dholpur | 23.7 | + 8 | Madras | 13.1 | + 18 | | |

Note.—In order to convert L. A. time into local time, add or subtract from the former the minutes of Longitude of the place in question as indicated by the sign of plus or minus in the above list.

TABLE 16.

Showing how many minutes the day begins in any place (from 0 to 30 degrees Latitude) before or after Sunrise at Lañkā (or 0 hour of the previous tables).

| The day begins before Sunrise at Lañkā. | | Degrees of Latitude. | | | | | | The day begins after Sunrise at Lañkā. | |
|--|-------------|----------------------|-----|-----|-----|-----|-----|---|-------------|
| New Style. | | 5° | 10° | 15° | 20° | 25° | 30° | New Style. | |
| | | m. | m. | m. | m. | m. | m. | | |
| 21 March.. | 23 Sept.... | 0 | 0 | 0 | 0 | 0 | 0 | 23 Sept.... | 21 March |
| 26 „ ... | 18 „ ... | 1 | 1 | 2 | 3 | 4 | 5 | 28 Sept.... | 16 „ |
| 31 March.. | 13 „ ... | 1 | 3 | 4 | 6 | 7 | 9 | 3 Oct. ... | 11 „ |
| 5 April ... | 8 „ ... | 2 | 4 | 6 | 9 | 11 | 14 | 8 „ ... | 6 „ |
| 10 „ ... | 3 „ ... | 3 | 6 | 9 | 12 | 15 | 19 | 13 „ ... | 1 March. |
| 15 „ ... | 28 Aug.... | 4 | 7 | 11 | 15 | 19 | 23 | 19 „ ... | 23 Feb. ... |
| 21 „ ... | 22 „ ... | 4 | 9 | 13 | 18 | 23 | 28 | 24 „ ... | 18 „ ... |
| 27 April ... | 16 „ ... | 5 | 10 | 15 | 21 | 27 | 33 | 29 Oct. ... | 12 „ ... |
| 3 May ... | 10 „ ... | 6 | 12 | 18 | 23 | 31 | 38 | 5 Nov.... | 6 Feb. ... |
| 10 „ ... | 3 „ ... | 7 | 13 | 20 | 27 | 35 | 43 | 12 „ ... | 30 Jan. ... |
| 18 „ ... | 26 July ... | 7 | 15 | 22 | 31 | 39 | 49 | 18 „ ... | 23 „ ... |
| 25 „ ... | 19 „ ... | 8 | 16 | 25 | 34 | 43 | 54 | 25 Nov.... | 17 „ ... |
| 29 May ... | 15 „ ... | 9 | 17 | 26 | 36 | 46 | 57 | 1 Dec. ... | 12 Jan. ... |
| 22 June ... | 22 June ... | 9 | 18 | 27 | 37 | 48 | 60 | 21 Dec.... | 21 Dec. ... |

Note.—The days in this Table are registered in New Style, whereas in the previous Tables Old Style is used. Hence a date in Old Style must first be converted in the corresponding one in New Style.

TABLE 17.

Table of the Nakshatras and Yôgas.

| No. | Nakshatra. | Index. | Index for the ending-points of the nakshatras according to | | Yôga. | No. |
|-----|-------------------------------------|----------|---|--------|---------------|-----|
| | | | Brahma S. | Garga. | | |
| 1 | Āśvinî | 0—37 | 37 | 37 | Vishkambha | 1 |
| 2 | Bharanî | 38—74 | 55 | 56 | Prîti | 2 |
| 3 | Kṛittikâ | 75—111 | 91 | 93 | Ayushmat .. | 3 |
| 4 | Rohinî | 112—148 | 147 | 148 | Saubhâgya .. | 4 |
| 5 | Mrîga or Mrîga- śîrsha | 149—185 | 183 | 185 | Śôbhana ... | 5 |
| 6 | Ardrâ | 186—222 | 201 | 204 | Atigaṇḍa ... | 6 |
| 7 | Punarvasu | 223—259 | 258 | 259 | Sukarman .. | 7 |
| 8 | Pushya | 260—296 | 293 | 296 | Dhṛiti | 8 |
| 9 | Āślêshâ | 297—333 | 311 | 315 | Śôla | 9 |
| 10 | Maghâ | 334—370 | 348 | 352 | Gaṇḍa | 10 |
| 11 | Pârvâ-Phâlgunî .. | 371—407 | 382 | 389 | Vṛiddhi ... | 11 |
| 12 | Uttarâ-Phâlgunî .. | 408—444 | 439 | 444 | Dhruva | 12 |
| 13 | Hasta | 445—481 | 476 | 481 | Vyâghâta ... | 13 |
| 14 | Chitrâ | 482—518 | 513 | 518 | Harshaṇa ... | 14 |
| 15 | Svâtî | 519—556 | 531 | 537 | Vajra | 15 |
| 16 | Viśâkhâ | 557—593 | 586 | 593 | Siddhi Asrij) | 16 |
| 17 | Anurâdhâ | 594—630 | 622 | 630 | Vyatipâta ... | 17 |
| 18 | Jyêsthâ | 631—667 | 641 | 648 | Variyas ... | 18 |
| 19 | Mûla | 668—704 | 677 | 685 | Parigha ... | 19 |
| 20 | Pârvâ-Ashâḍhâ .. | 705—741 | 714 | 722 | Śiva | 20 |
| 21 | Uttarâ-Ashâḍhâ .. | 742—778 | 768 | 778 | Siddha | 21 |
| 22 | Śravana | 779—815 | 817 | 815 | Sâdhya | 22 |
| 23 | Śravishthâ, or Dhanishthâ ... | 816—852 | 853 | 852 | Śubha | 23 |
| 24 | Śatabhishaj, or Śatatârakâ | 853—889 | 872 | 876 | Śukla | 24 |
| 25 | Pârvâ-Bhadra- padâ | 890—926 | 909 | 908 | Brahman ... | 25 |
| 26 | Uttarâ-Bhadra- padâ | 927—963 | 963 | 963 | Indra | 26 |
| 27 | Rêvati | 964—1000 | 1,000 | 1,000 | Vaidhṛiti ... | 27 |

Table for Differences.

| Δ | Naksh. | Yoga. |
|----|--------|-------|
| | H. M. | H. M. |
| 1 | 0-39 | 0-37 |
| 2 | 1-19 | 1-13 |
| 3 | 1-58 | 1-50 |
| 4 | 2-38 | 2-27 |
| 5 | 3-17 | 3-4 |
| 6 | 3-56 | 3-41 |
| 7 | 4-36 | 4-1 |
| 8 | 5-16 | 4- |
| 9 | 5-55 | 5 |
| 10 | 6-34 | |
| 20 | 13-8 | |
| 30 | 19-42 | 18 |

Note. Sometimes an extraordinary *nakshatra*, Abhijit, is inserted between Uttarâ-Ashâḍhâ and Śravana. In that case, Abhijit has as Index 769-782. The Index for the ending-point according to the Brahma-Siddhanta system, is 780.

GURJARA INSCRIPTIONS, NO. III.
A NEW GRANT OF DADDA II. OR PRASANTARAGA.

BY G. BÜHLER, PH.D., LL.D., C.I.E.

THE subjoined inscription¹ is engraved on two copper plates, found some years ago at **Bagumrā**, in the Palsana Talukā of the Nausāri District in the **Baroda State**. I acquired them with some others, published in this Journal, Vol. XII, pp. 174-190 and Vol. XIII, pp. 65-69, by myself and Dr. E. Hultzsch, through the kind mediation of Rao Saheb Mohanlāl R. Jhaveri. The circumstances of the find have been mentioned in the former paper.

The measurements of the plates are about $10\frac{1}{4}$ " by 7", and $\frac{3}{16}$ " thick. The massive rings are preserved and in their proper position. To the right-hand ring the seal is attached; it shews, like those of the published grants of the same king from Umēta and Ilāo, the legend *śrī-Dadā* and a square emblem the character of which is not clear. The engraving has been done well. The letters are deeply cut and distinct. Only a few have suffered seriously or been destroyed by verdigris. The characters resemble those of the other two grants very closely. The word *vāsakāt* (l. 1) shews, as in the latter, the cursive form of *va*, which looks like *na*. The royal signature (l. 32) is written in the antiquated Nāgarī letters, which the Umēta grant also exhibits. The spelling and the grammar of the Sanskrit text are as slovenly and faulty as in the other two grants, with which the wording of its first portion agrees almost literally. But it must be noted that, though the character of the mistakes is the same, they do not always occur in the same words. Thus, in l. 1, U. reads *vāsakāt*,² B. and I. *vāsakāt*; in l. 3, U. and B. read *sanātā* and *paśādīpātānā*, I. *sātāpāt*, and *phalīgṛhānā*; ibidem U. reads *vastānā*, B. and I. *vastānā*; in l. 4, U. reads *dhātā*, B. and I. *dhātā*. In other cases B. alone has a faulty form and in one case, l. 4, where the context requires *klīṣṭa*, each grant shows

a peculiar mistake, U. reading *ślīṣṭa*, B. *ślīṣṭa*, and I. *ghlīṣṭa*. These facts prove that all three grants were prepared according to the same model form, but that the writers were, as the documents themselves assert, three different persons, all three distinguished by carelessness and ignorance of the classical language.

The contents of this new grant are as follows.—The 'supreme king of great kings,' the illustrious **Dadda II.**, who had obtained the five *maḥāśības* and who was the son of the illustrious Jayabhaṭa and the grandson of the illustrious Dadda I, presents the village of Tatha-Umbarā to a Brahman on the occasion of an eclipse of the sun, which happened on the new-moon day of the month Jyāishṭha, when 415 years of the Śaka king had elapsed. The village was situated in the *dharaśālīyā* or district of Tatha-Umbarā. Its boundaries were, to the east the village of Uśulathana, to the south Iṣa, to the west Saṁkiya, and to the north Juvavādra. The donee was Bhaṭṭa Gōvinda, the son of Bhaṭṭa Mahādharma, who belonged to the community of the Chaturvēdins of Kanyakubja, i. e. to the Kanōjī Brahmins of Gujārāt, to the Kauśika-gōtra, and to a school of the adherents of the Chhandōga-Sakha. He received the village in order to defray the expenses of the five so-called great sacrifices and of other religious ceremonies. The conditions of the grant are the usual ones. The charter was written by the royal servant Rēvaṭta, or, as the correct form of the name would be, Rēvaṭa, the son of Dambhara. Like the other two grants, it is dated from the victorious camp or cantonment (*śrī-līpā*), situated at the gate of the town of **Bharukachchha**.

The date and the geographical names are the only few points contained in the inscription, which require further remarks. The former seems to contain a mistake in the

¹ A German paper on this inscription has been published in the *Zeitung der Naturforschenden Wiener Akademie der Wissenschaften* Vol. CXIV, p. 890.

² In order to save space I will in the sequel the Umēta grant, U., that from Ilāo, I., and the new one, B.

³ To my remarks on the word *vastānā*, Vol. VII, p. 71 I may now add that it occurs also in Buhl-

Bastie's edition. In a note to *Sacred Books of the East*, Vol. XI, p. 31, Dr. Eug. Davids attributes for the word *vastānā* to the commentary the explanation *śrīpāṇi*. The meaning of *śrīpāṇi* or *śrīpāṇi* is not clear to me. Possibly the word is a corruption of *śrīpāṇi* and should be deleted that the *śrīpāṇi* should be twelve villages.

name of the month. According to Dr. Schram's calculations the new-moon day of Jyāishṭha, Saka-Samvat 415, corresponds to May 31, 425 A.D. On that day there was no eclipse of the sun, which, as the inscription asserts, occurred on the day when the grant was made. But on the next new-moon day, June 29, there was an annular eclipse, not visible in India. (See also Th. v. Oppolzer, *Canon der Finsternisse* No. 4937 and Blatt. 81 where the astronomical details regarding the eclipse are given.) It seems probable that this eclipse is meant. The discrepancy in the name of the month may have been caused by a mistake of the writer or by an erroneous intercalation. However that may be, the date possesses little importance for the history of Dadā II.; as the oldest of his other grants (U.) is dated fifteen years earlier, and the latest (L) two years later than our inscription. The date of the former is the full-moon day of Vaiśākha, Saka-Samvat 400, and that of the latter, the new-moon day of Jyāishṭha, Saka-Samvat 417.

More interesting are the **geographical names**. With the help of the map of the Trigonometrical Survey, Gujarat Series, No. 34, it is possible to identify nearly all the places mentioned. The village of **Tatha-Umbarā** is the modern **Bagumrā**, where the plates were found. For the boundaries are—

| According to the Inscription. | According to the Map. |
|---------------------------------------|---|
| to the west Sankiya. | to the west Sanki. |
| to the south Ishi. | to the south the old site of Isi. |
| to the north Jaravadra. | to the north Jolva. |
| to the east Ushulathaga. ⁵ | to the east a deserted site with an old village-tank. |

Though the fourth village cannot be traced to its proper position, the names of the other three suffice in order to prove the identity of Tatha-Umbarā and Bagumrā. As regards the latter two words, the second parts *chata* and *aga* are corruptions of Sanskrit *śata* *dhara* and

a thicket of *Ficus glomerata*. This word is still frequently used for naming villages and the maps show in the districts close to the Tapi a full half dozen of villages, called Umbarā. It is, therefore, very probable that the syllables Tatha and Bag have been prefixed in order to distinguish this Umbarā (Umārā) from other homonymous places. What the meaning of Bag may be I am unable to guess. But Tatha may possibly be a corruption of the Prakrit *tītha* and Sanskrit *tīrtha*. The value of the above identifications is that they prove the dominions of the Gurjara princes to have extended south of the Tapi. I must confess that formerly I believed that the southern boundaries of the Gurjara state had been identical with those of the present Collectorate of Broach, and I find that all other scholars, who have touched the question, have expressed the same opinion. On looking over Nos. 34 and 35 of the map of the Trigonometrical Survey (Gujarat Series) I have, however, discovered that the Umetā grant confirms the information which that of Bagumrā furnishes. The villages, named in the former, are likewise traceable, and lie a few miles to the north-east of those mentioned in the latter.

According to U., plate II. l. 11, the village granted was Nigūda, which belonged to the 116 villages of the *bhakti* of Kamapiya. This is the modern Nagôl, which lies at a short distance west of the town of Kamrôj.⁷ For its boundaries are—

| According to the Inscription. | According to the Map. |
|-------------------------------|-------------------------------------|
| to the east Vaghauri. | to the east Rudh-vārā. ⁶ |
| to the south Phalaha- | to the south [Mora] |
| vadra. | Phalod. |
| to the west Vinipra. | to the west Vihār. |
| to the north Dāhithali. | to the north Dērh. |

Though a village, the name of which corresponds to Vaghauri, is not found, the close resemblance of the remaining names suffices to

⁵ This name, too, survives. For, opposite to Pargana, the map shows a village called Gadhwa. This is probably a corruption of the name of the village mentioned in the inscription. The name of the village is not found in the map, but it is very probable that it is the same as the one mentioned in the inscription. Similar resettlements of villages occur frequently.

⁶ Kamrôj is mentioned in Mr. H. H. Dooly's *History of the Zivara District* (Dacca, 1878) p. 10. It is also mentioned in Mr. A. C. M. S. (1882) p. 10. It is also mentioned in Mr. B. G. S. (1882) p. 10.

from Gujarat. Vihār is mentioned in the map of Congress Series, Kamrôj. Dr. Bhagvold, in 1882, has been identified with Kāndhā, which is east of Saurashtra. I suppose is the Kamrôj of the Map.

⁷ I was slow at first in perceiving that this name is a corruption of Vaghauri, caused by the resemblance of the syllables *chata* and *dhara* in *dhara* to the syllables *chata* and *dhara* in *dhara*. Vaghauri is not the modern name of Vaghauri.

make the proposed identification incontrovertible. It is, therefore, certain that according to U. and B. the northern portion of the Surat District and the adjacent Gaikwâdî territory formed part of the Gurjara kingdom.

More important even than this result is the fact that the discovery of B. permits us to assert with full confidence the genuineness of U. and I., which has been disputed by Dr. Bhagvânlâl and by Mr. Fleet. But before I try to show the bearing of B. on this question, it seems to me advisable to subject the arguments, brought forward against U. and I., to a careful consideration. It seems to me that they are by no means so strong as the two eminent epigraphists suppose, and that a good deal may be said against them, even without extraneous assistance.

In order to accomplish this task, I must begin with a short review of the gradual development of our knowledge and of the theories regarding the Gurjara dynasty.

The name of the Gurjara first became known through Dr. Burns' four Khôdâ plates⁷ which mention (1) the illustrious *Sâmantâ* or feudal baron Dadda I., (2) his son the illustrious Jayabhata-Vîtarâga, and (3) his son the illustrious Dadda II. or Praśūtarâga, all of whom were worshippers of the sun or adherents of the Saura sect.

Their dates, Sâmvat 380 and 385, were taken to refer to the so-called Vikrama era, until a third grant, Dr. Bhândarkar's Ilâo plates,⁸ was discovered. The latter names likewise three princes, (1) the illustrious Dadda I., (2) the illustrious Jayabhata-Vîtarâga, and (3) the illustrious supreme king of great kings Dadda II.-Praśūtarâga. Relying on the identity of the names and of the *kirita*s, Dr. Bhândarkar assumed that the princes of I. were the same persons as those mentioned in Khô. I and II. But, as the date of I. was clearly the year 417 of the Saka era, and as the eclipse of the sun, stated to have occurred on the new-moon day of the month of Jyaishtha, corresponded, according

to Professor Kârô Lakshman's calculation, to that of June 8, 495 A.D., he transferred the three Gurjara princes from the fourth to the fifth century and assumed that the dates of Khô. I. and II. referred to the same era.

I accepted these combinations in my articles on the Kâvi⁹ and Umêtâ¹⁰ grants, which next came to light. The historical contents of the latter fully agree with those of I. Its date, full-moon day of Vaisâkha, Śaka-Sâmvat 199, fitted in well with those already known, which apparently lay between the years 380 and 417 of the same era. Kâ., of which only the second part has been preserved, names only one prince, the illustrious lord of feudal barons Jayabhata, who vanquished a king of Valabhî. I identified him with the Jayabhata of the other grants and referred the date, Sâmvat 486, tenth day of the bright half of Âshâdha, a Sunday, to the Vikrama era, and thus arrived at the year 429 A.D., which was not too early for the father of Dadda II.

These views were considered to be right for several years and were utilised by Mr. Fleet in his article on the Indian eras, *anc.*, Vol. XII, p. 291 and by General Sir A. Cunningham in his Book of Indian Eras, pp. 48-49. But matters changed when Dr. Bhagvânlâl published his important inscription from Nausâri.¹¹ This document mentions four princes,—(1) the illustrious Dadda I.; (2) his son the illustrious Jayabhata I.; (3) his son the illustrious Dadda II.-Bâhusahâya, an ardent devotee of Śiva; and (4) his son the illustrious Jayabhata II., an ardent devotee of Śiva. Of Dadda I. it narrates that he protected a prince of Valabhî against the supreme lord (*paramâdeva*) Sriharshadêva. Its date is Monday or Tuesday, the full-moon day of Mâgha, Sâmvat 436, at the time of an eclipse of the moon. The mention of the supreme lord Sriharshadêva, and the lucky discovery of some grants of the Chalukya's of Gujarât with dates according to two different eras enabled Dr. Bhagvânlâl to offer an altogether new theory regarding

⁷ Published by Mr. J. P. Benson, *Jour. Bur. Br. R.*, 1. S. Vol. VII, pp. 90-91, by Professor Dowson, *Jour. R. A. S. N. S.*, Vol. I, pp. 247-8, with a sketch and by Mr. Fleet, *anc.*, Vol. XIII, pp. 518-521, under the title Khô. I. and II.

⁸ Published by Dr. R. G. Bhandarkar, *Jour. Bur. Br. R. A. S.*, Vol. X, pp. 190-191, and also translated by Mr.

Fleet, *anc.*, Vol. XIII, pp. 116-117.

⁹ *anc.*, Vol. V, pp. 169-170, photograph contained in Mr. Fleet's Sanskrit, Pali and Old-Kanarese Inscriptions, plate 72. The area with the latter has been called Khô.

¹⁰ Published by Benson, *anc.*, Vol. VII, pp. 90-91.

¹¹ *anc.*, Vol. XIII, pp. 70-71, and also in Mr. N.

the Gujjaras of Broach and their inscriptions. He very naturally identified Śrīharshadēva with Śrīharsha-Harshayardhana, the famous king of Thāpōsar and Kanauj, who ruled from 606 to 645 A.D. over the greater part of Northern and Western India. If this identification was to stand, the reign of the first Dadda, mentioned in Na, must fall in the first half of the seventh century A.D. The possibility of proving this was given by the inscriptions of three nephews of Pulakēśin II. of Bālamī (610-634 A.D.), viz. Śīlāditya, Maṅgalarāja and Pulakēśin, sons of Jayasimhavarmān, who ruled over southern Gujjarāt as feudatories of the Western Chalukyas. Their grants being dated Sāṃvat 421, Sāṃvat 443, Śaka-Sāṃvat 653 and Sāṃvat 490, it followed that an era, simply marked by the word Sāṃvat and beginning shortly before 250 A.D., was used in Gujjarāt during the seventh and eighth centuries. Fixing its initial date conjecturally in 244-45 or 245-46, and assuming that the date of Na, Sāṃvat 456, referred to it, Dr. Bhagvānlāl obtained for the latter the year 700 or 702 A.D., and thereby the probability that the first Dadda, the third ancestor of the donor of Na, reigned between 600-625, or even somewhat later. As Khē. I., Khē. II. and Kā. likewise bear dates simply marked Sāṃvat, it became probable that the era intended was the same as that of Na. With this supposition Sāṃvat 380 corresponded to 624-626 A.D. and Sāṃvat 385 to 629-631 and it appeared that the donor of the Khēḍā grants, Dadda II.-Prasāntarāga, was the same person as the first Dadda of Na. The Kāvi date, Sāṃvat 486, on the other hand, being now equal to 730-731 A.D., its Jayabhata, the lord of great feudal barons, had to be considered as identical with the donor of Na. By means of these highly ingenious combinations, the probability of which Dr. Bhagvānlāl believed to be increased by epigraphic arguments, he obtained the following pedigree of the Gujjarā dynasty: (1) Dadda I., the feudal baron, (2) Jayabhata I.-Vitarāga, (3) Dadda II.-Prasāntarāga, Sāṃvat 380-385, or 624-631 A.D., a contemporary of king Śrīharsha, 600-645 A.D., (4) Jayabhata II., (5) Dadda III.-Bhūshabha, (6) Jayabhata III., Sāṃvat 456-486, or, 700-2 to 730-2

A.D. As the statements of U. and I. which placed Dadda II.-Prasāntarāga in the fifth century, did not seem to agree with these results, Dr. Bhagvānlāl declared them to be spurious and contended that they must be forgeries, (1) because U. and I. in spite of the alleged interval of seventeen years resemble each other so much that they must have been written by the same person, (2) because they closely resemble a spurious grant of Dharaśēna II. of Valabhi,¹² which has been fabricated by the same forger, (3) because it is alleged that I. has been written by the same writer Rēva, who drew up Khē. I and II. He thought it, however, not impossible that the spurious grants might contain correct dates for the reign of Dadda II., if it might be assumed that the forger had only made a mistake with respect to the era.

A portion of Dr. Bhagvānlāl's conjectures was apparently confirmed by a discovery of Sir A. Cunningham, which Mr. Fleet published in a postscript to the article. The nearness of Dr. Bhagvānlāl's initial date 244-246 A.D. to 249-50 A.D., the supposed beginning of the Chēdi era which the Kulachuri or Hailaya kings of Tripura used, led Sir A. Cunningham to suspect that the latter might be the Sāṃvat occurring in the Gujjarā and Chalukya inscriptions. Calculating on this supposition the date of Na, "Monday or Tuesday, 15th day of the bright half of Māgha of Sāṃvat 456, at the time of an eclipse of the moon," he found that it corresponded to February 2, 706 A.D., a Tuesday, on which date an eclipse of the moon actually happened. On the same supposition the week-day of Kā, had been given correctly. For Chēdi-Sāṃvat 486, 10th day of the bright half of Āshāḍha, corresponds to June 24, 736, which was a Sunday. Sir A. Cunningham also calculated the date of I. on the supposition that Śaka-Sāṃvat had been written erroneously for Chēdi-Sāṃvat. The result was that though no eclipse happened in the month of Jyāishṭha of the exactly corresponding year 666, this was the case in the preceding one, 665 A.D. when the new moon of Jyāishṭha fell according to the *Upaniṣad* reckoning on April 21. Hence the possibility, that the date of I. was as

¹² See my article *op. cit.* Vol. X. pp. 277ff

Dr. Bhagvânâl thought, a genuine one, could not be denied.¹³ In his later article on the Ilâo grant, Mr. Fleet added two new arguments against the genuineness of U. and I. to those brought forward by Dr. Bhagvânâl. First he pointed out that the description of Dadda I. given in Khê. I. and II. agrees literally with that of Dadda II. in U. and I.; and that the latter grants show some corrupt readings not occurring in the former. Hence he inferred that the author of U. and I. must have known the Khêdâ plates and have copied from them. As the Khêdâ plates had been shown to belong to the seventh century, U. and I. could not possibly have been written in Śaka-Saṃvat 400 and 417, or 478 and 495 A.D. Secondly, he remarked that no weight could be attached to the apparently correct mention of the solar eclipse of June 8, 495 A.D., in I., because it was not visible in India and for this reason would not be noticed by an Indian astronomer.

Of late, the correctness of Sir A. Cunningham's view regarding the initial date of the Chêdi has been disputed. Dr. Kielhorn's calculations of the numerous week-days mentioned in the grants of the Chêdi kings tend to show¹⁴ that it began not in 249, but in 248 A.D.¹⁵ This alteration makes no difference for the week-day and the lunar eclipse mentioned in Na. They agree with either assumption. In the one case the year 456 has to be taken as current, in the other as elapsed. But the complicated data in Kâ., which alleges that the grant was made in Saṃvat 486 on Āshâḍha śu di 10, when the sun had entered the sign of Karkāṭaka, offer a difficulty which Dr. Kielhorn has not yet found it possible to solve.¹⁶

Nevertheless, I believe that among the various inferences drawn by Dr. Bhagvânâl from the contents of Na., and from the Chalukya dates, the following may be considered as correct. (1) Na. is certainly dated according to the Chêdi-Saṃvat; and the supreme lord Śrīharshadêva, mentioned as the contemporary of its first Dadda, is the

same person as Śrīharsha-Harshavardhana, alias Śilāditya. (2) It seems most probable that Kâ., too, belongs, not as I thought formerly, to the fifth, but to the eighth century A.D. Dr. Bhagvânâl's further inference that Na. and Kâ. have been issued by the same Jayabhata, may be also accepted provisionally. The interval between their two dates is not too long for one reign. But the possibility that the donors may be different persons, between whom another Dadda reigned, is not altogether excluded. Dr. Bhagvânâl's assertion that the close resemblance of the characters of the two inscriptions and of their form or wording show them to belong to the same reign, says too much. The characters of two grants, only thirty years apart, will not show any great difference, whether they were issued by one or by two different kings of the same dynasty. The wording of the two documents does not at all agree. The descriptions of Jayabhata in Na. and Kâ. have only two words in common, *śamadhigatapañchamahāśabda* and *śrī*, and the enumeration of the conditions of the grant shows many discrepancies. And (3) I must also agree with Dr. Bhagvânâl in his assumption that Khê. I. and II. belong not to the fifth but to the seventh century, though I am unable to accept his arguments. He said "the characters of the Kaira, Nausârî and Kāvî grants are all precisely of the same type and as like each other as can possibly be the case of inscriptions, the actual engraving of which was done by different men. On the other hand, the characters of the Umêtâ and Ilâo grants are identical with each other and differ entirely from those of the four grants." These sweeping assertions are not quite borne out by the facts. Even a superficial comparison of the facsimiles shows that the characters of Khê. I. and Khê. II. do not fully agree, and that they agree still less with Na. and Kâ. On the other hand, Khê. I. frequently agrees with U. and I. Thus the signs for *ja*, *ba* and *va* are exactly the same in U. I. and Khê. I. The

¹³ As the following discussion will show that the suspicions against U. and I. are unfounded, I shall not again refer to this point. But I may add that April 21, 665 was, according to the *Amānta* reckoning of the Gujarâtis, the new-moon day of Vaisākha, not of Jyāishṭha.

¹⁴ See his letters in the *Academy* of Dec 10 and 24, 1887.

¹⁵ Dr. Bhagvânâl held to the last that the Chêdi

Saṃvat is identical with that of the Traikūtakas. In his paper on two new Chalukya inscriptions, published in the *Verhandlungen des siebenten Inter. Or. Congresses Arische Section*, he made pp. 219-222 some very ingenious suggestions as to its origin. He conjectured that Śaka-Saṃvat 170 or 248 A.D. was its initial point.

¹⁶ See Dr. Kielhorn's letter in the *Academy* of Jan 14, 1888.

ba with a notch in the top line occurs in none of the other inscriptions, the *ja* with the same peculiarity only in *Kâ.*, and the *va* in the shape of an isosceles triangle, only occasionally in *Na.* and *Kâ.* Again the form of *na* agrees throughout in *I. U.* and *Kâ.*, while a different sign is used once in *Khê. I.*, more frequently in *Khê. II.* and throughout in *Na.* Similarly the peculiar *cha* of *U.* and *I.* occurs in *Kâ.*, while *Khê. I. Khê. II.* and *Na.* have a very different sign. These instances will suffice to prove that Dr. Bhagvānlāl's grouping of the grants on palæographic principles is not tenable. If I nevertheless accept his conclusion, my reasons are (1) that, if a Gurjara inscription of *Saṃvat 456* is dated according to the *Chēdi* era, it is most probable that those of *Saṃvat 380* and *385* refer to the same era, (2) that hitherto no certain cases from the older times have become known in which the word *Saṃvat* stands for *Śaka-Saṃvat* or *Śakaṇṇipakāla*.

Dr. Bhagvānlāl's remaining inference, that *U.* and *I.* are forgeries, seems to me untenable. His first argument, the assertion that their perfect agreement in characters and form shows them to have been written by one and the same person, rests, it seems to me, on an insufficiently accurate comparison of the two documents. It is no doubt true that they are very similar. But their resemblance is just such a one as might be expected in the case of two grants written by a father and son in an archaic alphabet, not in daily use. The main features mostly agree, but in the details various small differences are observable. Thus in *U.* the left hand stroke of the *ta* is drawn down much further than in *I.*; the top of *ṭa* shows in *I.* frequently, e. g. in *makutō* (l. 4) *ghatā* (l. 6) *sphaṭika* (l. 8) etc. a straight horizontal line which is wanting in *U.*; the use of the superscribed *mātrā* and of the *prishṭhamātrā* does not agree in the two documents; finally the signature of the king shows in *U.* cursive *Nāgarī* characters and in *I.* the same alphabet in which the rest of the inscription is written. Again, as regards the wording quite a number of discrepancies occur. It has already been pointed out above that, though the character of the numerous mis-spellings and mistakes is

the same, they do not always occur in the same words. There are further some more or less important various readings, such as. *sampatka* (*U. pl. I. l. 12*) against *sampanna* (*I.*), *charchitāṅgasamunnata* (*U.*) against *charchitasamunnata*; and very considerable deviations in the description of the boundaries of the villages granted (*U. pl. II. ll. 2-3* and *I. pl. I. l. 15*). The natural explanation of these facts is, I think, that the two grants were written by two different persons. Of course, they may also be reconciled with the theory that both belong to one forger. But it seems to me impossible to assert that the agreement of the inscriptions is such that they must be considered the work of one hand.

The same remarks apply to Dr. Bhagvānlāl's second argument, that the plates must be forgeries, because they closely resemble the admittedly forged grant of *Dharasēna II.*, dated *Śaka-Saṃvat 400*, and have been evidently fabricated by the forger of the spurious *Valabhī* inscription. The latter again shows a number of very striking peculiarities in the alphabet not found in *U.* and *I.* The upper end of the superscribed *mātrā* has a strongly marked curve and the same flourish appears at the lower end of the left limb of *ta*. Further, in the syllables *ṇā*, *ṇō* and *ṭā* the *ā*-stroke is marked by a vertical line turned upwards.¹⁷ Moreover the subscribed *ṇa* in *sam-ājñāpayati* (*pl. I. l. 16*), *yajña* (*pl. II. l. 2*) and *ajñāna* (*pl. II. l. 12*) resembles that of *Skandagupta's Kahāṇḍī* inscription, not that of *U.* and *I.* Again, in the letter *ph* the little tail, drawn through the bottom line, which *U.* and *I.* show, is wanting. Finally in the groups beginning with *s*, e. g. *sta*, *sva*, *sma*, etc., the lower letter is invariably attached to the right-hand vertical of *sa*, while in *U.* and *I.* it is connected with the left-hand limb.¹⁸ These very striking differences in the characters, as well as numerous various readings in the otherwise similar portions of the texts, and some very peculiar grammatical mistakes, make it, to my mind, most improbable that the spurious *Valabhī* grant was done by the same person as *U.* and *I.* On the contrary, they prove that the forger was acquainted with at least one of

¹⁷ Compare e. g. (*ante*, Vol. X. pp. 283-284) *pl. I. l. 3. arandā*, l. 6 *karan*; and *nipunitara*; l. 8 *kiranā*; l. 14 *akishano*; l. 15 *bhattiraka* and *grāmakūṭā*.

¹⁸ Compare e. g. the first word *svasti* in the three inscriptions.

these documents, but that in using it as his model he failed to catch and to reproduce all its striking peculiarities. Dr. Bhagvânâlâl's last argument, that the writer of I. is stated to be the same person as that of Khê. I. and II., rests on an identification for which there is absolutely no good reason. The writer of the latter two grants was "the minister for war and peace Rêva," and that of I., "the minister of war and peace Rêva, the son of Mâdhava." As in Khê. I. and II. the father's name is not given, and as among the Gujarâtî Brâhmaṇs the name Rêva, or Rêvâsaṅkar as we should say at present, is as common as Jack or George among Englishmen, it is not in the least necessary to consider the two writers as the same person. Consequently, it is not possible to contend with Dr. Bhagvânâlâl, that I. is proved to be a forgery, because it contains the assertion that its writer is the same person as the writer of Khê. I. and Khê. II.

The additional arguments, brought forward by Mr. Fleet, seem to me likewise inconclusive. It is perfectly correct that the description of Dadda I. in I. and U. agrees literally with that given in Khê. I. and II. of Dadda II. It is further true that the latter inscriptions offer in this passage at least three better readings than I. and U.—*sakalaghanapaṭalavinirggatarajanîkara*,¹⁹ 'the full moon that comes forth from a bank of clouds' is grammatically less correct than *sajalaghanapaṭalavinirggatarajanîkara*, 'the moon that comes forth from a bank of water-laden clouds.' For the first adjective *sakala* ought on account of its position to qualify *ghana*, not the remote *rajanîkara*. Nevertheless the Kâvyas and the inscriptions offer numerous instances in which the position of the parts of compounds is not always the natural one. If one part of a compound is a short word and the other a longer one, it happens frequently that the natural order is inverted. The short word is usually placed first. The sense of the reading of I. and U. is preferable, because it yields an

additional compliment for the king. As regards the variæ lectiones °*yaśahpratâpasthagitanabhômaṇḍalaḥ* and °*phalôdgiyamâna*²⁰ for °*yaśahpratânâsthagitanabhômaṇḍalaḥ* and °*chchhalôdgiyamâna*,²¹ their sense is certainly not good, and it looks as if they had been caused by misreading of the old aksharas *nâ* and *chha*.²¹ Finally, it is absolutely certain that °*arthijanâslishta*° (U.) and °*arthijanachlishta*° (I.) are mistakes for °*arthijanaklishta*°, which latter form is, curiously enough, not found in any inscription. Khê. I. gives °*arthijanâklishta*° and Khê. II. *arthijanâklishta*°, and both thus too show blunders in this passage. But even if we concede for argument's sake that Khê. I. and II. have in all four cases the better reading, it by no means follows that I. and U. must have been written after Khê. I. and Khê. II. and hence be forgeries. For in other cases where we have a series of undoubtedly genuine inscriptions of the same dynasty, we find occasionally better readings in the later documents and inferior ones or simply corruptions in the older ones. Instances of this kind occur rather frequently in the grants of the kings of Valabhî. Thus the grant of Śilāditya VI. dated Saṁvat 441, is fearfully corrupt, and the description of the donor hardly intelligible, while that of his son and successor, Śilāditya VII.-Dhṛubhaṭa, is very much better.²² Again in the inscriptions of the Râshṭrakûtas of Gujarât, dated Śaka-Saṁvat 734 and 749, the identical verse 1 is seriously corrupt in the former and nearly correct in the latter.²³ Moreover, verse 5 of the grant of 734, which is identical with verse 33 of the grant of 749, contains a reading, *nidêśanam*, which, as Mr. Fleet remarks l. c. p. 159, note 13, is not as good as that of the second, *nîdarśanam*. These two inscriptions furnish also the proof that the authors of the *Vanśâvali* certainly did use the same verses for the description of different kings. In the grant of 734 the just mentioned verse 5 says,— "when on some occasion or other a discussion arose regarding good government, it was

¹⁹ See, below the text. Pl. I. l. 1. I have formerly construed *sakala* erroneously with *ghana*.

²⁰ See below the text Pl. I. ll. 2 and 3.

²¹ A carelessly made *nâ* would nearly look like *pa*, and *chha* (not *chchha*, as Khê. I. and II. read) might easily be read as *pha*.

²² See *ante*, Vol. VI. p. 16ff and Vol. VII. p. 79ff.

²³ See *ante*, Vol. XII. p. 158, and Vol. V.

p. 145. The first inscription reads, स बोत्राद्देधसा येन यत्राभिकमलकृतं हरश्च यस्य कान्तेन्दुकलया समलकृतं ॥

This is simply nonsense. The second has merely one mistake, caused by the pronunciation, स बोत्राद्देधसो धाम यत्राभिकमलकृतं । हरश्च यस्य कान्तेन्दुकलया कमलकृतम् ॥

formerly, forsooth, (customary to note as) an instance the reign of (king) Bali, during which all men enjoyed prosperity; now, however, (they name) on earth (that) of this king." The king, to whom this compliment is paid, is Karka I. In the grant of 749 it is inserted in the description of Karka II., the sixth descendant of Karka I. Again, verse 9 of the grant of 734 is identical with verse 34 of the grant of 749. In the former it refers to Kṛishṇa I., in the latter to Karka II. It has never occurred to any one to declare the Valabhī grant of Samvat 441 and the Rāshtrakūṭa grant of Śaka-Samvat 734 to be forgeries, because later ones of the same series show better readings in the identical passages, or because verses, describing an earlier king, refer in a later grant to one of his successors. Thence, it is not permissible to use these points as arguments against the genuineness of I. and U. and to assert that they prove these plates to have been engraved after Khê. I. and II. On the contrary, if one closely examines the wording of the two sets of documents, it seems to me evident that it proves I. and U. to be the older ones. For their *Vanśāvali* has throughout the same character. Each of the three kings is described by a few epithets, mostly long Bṛhuvrīhi compounds. The *Vanśāvali* of Khê. I. and II. on the other hand, shows a curious incongruity. The first Dadda and Jayabhāṭa are described in highly artificial language, by a string of rather common-place but extravagant comparisons. With Dadda II. the style changes and the description becomes simple and shorter. This disparity seems to indicate that the court-poet, who composed the *Vanśāvali*, tired, when he had shown his art in praising two kings, and copied the rest of his work from the older model form.

With respect to the eclipse of the sun, I cannot agree with Mr. Fleet in his opinion that a Hindu astronomer or astrologer would not notice an invisible eclipse.²⁴ The great majority of the eclipses mentioned in the inscriptions were no doubt visible, and the reason is that on the occasion of a visible eclipse fasting, bathing

and gifts are according to the Brāhmanical law highly meritorious, nay absolutely necessary. On the occurrence of a calculated eclipse of the sun which falls in India before sunrise, or of an eclipse of the moon which falls in India before sunset, these observances are not required. The mediæval Nibandhas, known to me, agree on this point, and some of them adduce passages of rather doubtful Smṛitis, such as the *Shatṭrimśat*²⁵ as their authorities. The restriction of obligatory gifts to visible eclipses, however, does not preclude the possibility that kings who wished to make gifts chose intentionally, in case no visible eclipse was close at hand, the day of an invisible one, and that they still believed to have secured for themselves the great rewards promised for a gift made *grahana-parvāni*. In such a case the invisible eclipse would of course be entered in the grants. And there is yet another circumstance, which, as Dr. Schram has pointed out to me, would explain the occasional mention of invisible eclipses. According to him the methods for the calculation of eclipses, known to the older Hindu astronomers, were so rough and primitive, that they made it very difficult to determine with certainty whether an eclipse would be visible in any given place. He thinks that errors on this point must have frequently occurred, and that such errors may have easily escaped detection, in case the eclipses were partial and occurred during the rainy season, when the sky is not rarely clouded for weeks. Under such circumstances an invisible eclipse would of course be treated like a visible one. For though an eclipse, believed to be a visible one, is not actually observed, the sky being covered by clouds, the prescribed observances are yet obligatory.²⁶ It would, therefore, seem that the eclipse, mentioned in the Ilāo grant which fell in June, the beginning of the rainy season in Western India, may have been considered to be a really visible one and have been treated as such.

These remarks will suffice to show that the arguments, brought forward against the genuineness of I. and U. are by no

²⁴ The opinion is, of course, one which I am quite ready to abandon, if good reasons for doing so are shown. But it will be necessary to examine the circumstances of a fair number of eclipses in as many undoubtedly genuine records as can be referred to.—J. F. F.]

²⁵ *Nirayāsundhu*, Par. I. fol. 32b. l. 11 सूर्यग्रहो यदा राजौ

दिवा चन्द्रग्रहस्तथा । तत्र स्नानं न कुर्वीत दद्यादानं च ना कचिदिदि पदत्रिशमनात् ॥ The *Shatṭrimśat-Smṛiti* is one of those compilations, which, though called *Smṛiti*, belong to not very remote times.

²⁶ See the long discussion on this point. *Nirayāsundhu*, Par. I. fol. 35a. l. 6—fol. 36b l. 11.

means conclusive. On the other hand, there are various reasons which speak against the assumption that they are forgeries. (1) The characters in which they are written are certainly ancient. (2) The statement that the first was written by Mâdhava, the son of Gilaka, and the second by Rêva, the son of Mâdhava, is of some importance. A Hindu forger would hardly think of such a collateral circumstance. And (3) their historical contents, taken by themselves, are perfectly believable. There is no reason why we should deny the existence of a Gurjara kingdom during the fifth century A.D., and the interval of seventeen years, at which they are stated to have been issued, is not too long for the reign of one king. If Dr. Bhagvânâlâl felt unable to reconcile their contents with those of Khê. I. and II. his difficulty was, I think, merely a self-created one. Though both sets of documents name three homonymous kings, two of which receive also the same *birudas*, it by no means follows that the same persons are meant.²⁷ The pedigree of the Gurjaras which Dr. Bhagvânâlâl gave, *ante*, Vol. XIII. p. 73, according to the Khêdâ and Nausâri grants, and which I too consider to be correct, shows that these kings during six generations contented themselves with the two names, Dadda and Jayabhata. Dr. Bhagvânâlâl also gave the correct explanation of this curious fact. He added that the Hindus very commonly name the grandson after the grandfather. I see no reason why we should deny that this practice had prevailed for a longer time, and that in the fifth and sixth centuries each Dadda was succeeded by a Jayabhata and each Jayabhata by a Dadda, as regularly as during the seventh and eighth. Nor is the repetition of the same *birudas* anything unheard of or even extraordinary. There are other instances of the same kind. Thus among the Râshṭrakûṭas,²⁸ Gôvinda [III.] surnamed Jagattuṅga is succeeded by an Amôghavarsha and the latter by a Kṛishṇa [II.] called Akâlavarsha. Then follows another Jagattuṅga [II.] one of whose sons bears the name Amôghavarsha, and the son of the latter is again a Kṛishṇa with the *biruda* Akâlavarsha. Under these circumstances it seems impossible to suspect the

information, conveyed by the Gurjara plates, that one Dadda-Prasântarâga, the son of a Jayabhata-Vitarâga, ruled in the fifth century, while the reign of another prince, who bears the same name and the same honorific title and likewise was the son of a Jayabhata-Vitarâga, fell in the seventh century. This view gains, I think, a great deal more probability by the find of the Bagumrâ inscription. For, instead of two, we have now three documents which fully agree in their historical contents, which all three show ancient characters and show as close a relationship to each other as may be expected from their belonging to the short period of seventeen years. The larger such a group of grants becomes, the less is it possible to deny their genuineness. For they mutually protect each other, since the contents of the one confirm those of the others. With every additional document, the hypothesis that we have to deal with the works of a forger, requires more and more complicated suppositions and hence becomes more difficult. I believe it to be unnecessary to point out these difficulties in detail; and I turn to the more important task of attempting a systematic arrangement of the historical information which the Gurjara grants yield, and of supplementing it by the statements of some other documents.

Assuming, as we now must do, the three grants, U. B. and I. to be genuine, we obtain from the seven sets of plates, the following pedigree of the Gurjara princes of Broach:—

| | |
|---|-------------------------------------|
| Dadda I. [circa 430 A.D.] | |
| | |
| Jayabhata I.-Vitarâga I. [circa 455 A.D.] | |
| | |
| Dadda II.-Prasântarâga I. [Śaka-Samvat 400 | |
| \| | 415, 417, or 478-495 A.D.] |
| | |
| | |
| Dadda III. [circa 580 A.D.] | |
| | |
| Jayabhata II.-Vitarâga II. [circa 605 A.D.] | |
| | |
| Dadda IV.-Prasântarâga II. [Chêdi-Samvat | |
| \| | 380, 385, or 628-29 to 633-34 A.D.] |
| Jayabhata III. [circa 655 A.D.] | |
| | |
| Dadda V.-Bâhusahâya [circa 680 A.D.] | |
| | |
| Jayabhata IV. [Chêdi-Samvat 456 to 486, or | |
| \| | 706 to 734-35 A.D.] |

²⁷ The full analysis of the historical contents of the plates, given below, will show that there are good

reasons for not identifying them.

²⁸ *ante*, Vol. XI. p. 109.

In fixing the approximate dates of the kings of whose times we have no inscriptions, I go on the assumption that the duration of a generation is about twenty-five years. The gap between Dadda II. and Dadda III. was probably filled by the reigns of two Jayabhaṭas and of one Dadda between them. The period of about 80 years is just long enough for three reigns.

With a single exception all the complete inscriptions call the princes enumerated above, scions of the **Gurjara race**; and Khê. I. and II. highly extol the greatness and wide extent of this family. Na. alone names the Mahārāja Karṇa as their ancestor. With respect to this personage it is for the present impossible to say whether the famous hero of the Mahābhārata may be meant, or some real historical king. But the name Gurjara makes it evident that this dynasty belonged to the great tribe which is still found in Northern and Western India and after which two provinces, one in the Bombay Presidency and one in the Pañjāb, have been named. The Gurjaras or Gujars are at present pretty numerous in the western Himālaya, in the Pañjāb and in Eastern Rājputāna. In Kachh and Gujarāt their number is much smaller. It would, therefore, seem that they came into Western India from the north. Their immigration must have taken place in early times, about the beginning of our era or shortly afterwards. In Western India they founded, besides the kingdom of Broach, another larger state which lay some hundred miles further north. Hiuen Tsiang mentions in his travels²⁹ the kingdom of *Kiu-che-lo* and its capital *Pi-lo-mi-lo*. It has been long known that the former word corresponds to Gurjara. But the name of the town has been incorrectly

connected by the French scholars with Bālmēr in the Jēsalmīr territory, and this identification has been accepted in Mr. Beal's new translation of the *Siyuki*. As I have stated already formerly³⁰ following Colonel J. Watson, *Pilomilo* corresponds exactly to Bhīllamāla, one of the old names of the modern Bhīnmāl or Śrīmāl³¹ in southern Mārvād close to the northern frontier of Gujarāt. Another work, which was composed a few years before Hiuen Tsiang's visit to Gujarāt, contains likewise a notice of this northern kingdom of the Gurjaras. The astronomer, Brahmagupta, who completed his Siddhānta in Śaka-Saṃvat 550 or 628 A.D., calls himself Bhīllamālakakāchārya,³² 'the teacher residing in Bhīllamālaka,' and is called so by his commentator Pṛithūdakasvāmin. He further states that he wrote under king Vyāghramukha who was 'an ornament of the Chāpa race.' This family, whose name recurs in the Haddāla grant of Dharaṇīvarāha³³ prince of Vadhivān, thus seems to have been the reigning house of Bhīllamāla. It is most probably identical with the Chāudās, Chāvōtakas³⁴ or Chāpōtkatas, who from 756 to 941 A.D. held Aphilvād and still possess various small districts in northern Gujarāt. The Gurjara kingdom of Broach was without a doubt an offshoot of the larger State in the north, and it may be that its rulers, too, belonged to the Chāpa family.

The capital of the southern Gurjara State seems to have been always Broach, which town has possessed since remote times a very great importance. U. B. and I. are dated from a *vikshēpa*, probably a cantonment, situated at the gates of Broach; while in Khê. I. and II. Nāndīpurī is named as the place of issue. The latter name refers, as I have shown formerly,

²⁹ Beal, *Siyuki*, Vol. II. p. 269f. Hiuen Tsiang assigns to the northern Gurjara State an extent about double of that given for the kingdom of Broach.

³⁰ *ante*, Vol. VI. p. 63.

³¹ Bhīllamāla means etymologically 'the field of the Bhil' and Śrīmāla 'the field of Sri'. The latter name must also be ancient as the Śrīmālī Brāhmanas are called after it. The Jāmas narrate various, of course incredible, legends, which explain how Śrīmāla came to be called Bhīllamāla. Merutunga says that king Bhōja invented the latter name, because the people of Śrīmāla let the poet Māgha die of starvation. According to another authority the town had a different name in each Yuga. It is in India very common for ancient towns to have two or even more names. Thus Kanauj was called, Kāyākubja, Gadhīpura, and Mahodaya.

³² See Professor A. Weber, *Die Sanskrit und Prakrit Handschriften der Berliner Bibliothek*, Vol. II. pp. 297.

³³ In the first passage the MSS. offers incorrectly

Bhīllamāchārya; in the second which occurs in the commentary on the *Khavākhādya*, we have Bhīllamālavāchārya, a slightly corrupt reading. This latter varialektio occurs also in other MSS., see Weber, *Indische Streifen*, Vol. III. p. 90, and has given rise to erroneous suppositions regarding Brahmagupta's home. The Gujarātī Jōshis still preserve the tradition that Brahmagupta was a native of Bhīnmāl.

³⁴ *ante*, Vol. XII. p. 190ff. The remark which I have made there that the Chāpas are not named elsewhere of course requires correction.

³⁵ The term Chāvōtaka, which occurs in Dr. Bhagvānī's grant of the Gujarāt Chalukya king Pulakīśin of Saṃvat 490 is the immediate predecessor of the word Chāulā. Its Sanskrit original is certainly not Chāpōtkata which probably has been coined in comparatively speaking modern times, in order to explain the difficult Prakrit word, just as the bard of Rājputāna have invented Rāshīraulha as etymon for Rāshol.

to an ancient fort which once rose east of Broach close to the Jhad svar gate.³⁵ Na. and Kâ. give no definite information on this point, as the former grant was issued during a royal progress at Kâyavatâra,³⁶ probably a *tirtha*, and as the first half of the latter is missing.

The Broach kingdom included, according to the testimony of the inscriptions, the whole of central Gujarât and the northern part of southern Gujarât, i.e. the present Broach District, the Tâlukâs of Ôlpâd, Chôrâsi and Bârdôli of the Surat District, as well as the adjoining parts of the Barôdâ State, of the Rêvâkânthâ and of Sachîn. Its northern frontier was probably the river Mahî; and the southern one the river Ambikâ. For, U. B. and I. grant villages in the Tâlukâ of Auklêshvar and in the Gaikwâdî districts south of the Taptî.³⁷ Khê. I. and II. both refer to the distribution of the village of Śirishapadraka, the modern Sîsôdrâ, in Auklêshvar. The villages named in Na, Śamîpadraka, Gôlikâ and Dhâhaddha, were situated in the *pathaka* or Tâlukâ of Kôrillâ. The latter place has been correctly identified by Dr. Bhagvânâlâl with Kôral on the northern bank of the Narmadâ, in 21° 50' N. Lat. and 73° 15' E. Long. Kôral was still in the beginning of this century the chief town of a Gaikwâdî Parganâ (Forbes, *Râs Mâlâ*, p. 390, 2nd edition). The village of Śamîpadraka, to the territory of which the granted field belonged, is probably Samrâ, north of Kôral (Trig. Surv. Guj. Ser. No. 31). I identify

Dhâhadda with the Dhâwat of the map (Trig. Surv. Map. Guj. Ser. No. 30) north-west of Samrâ, because the road from Samîpadraka to Dhâhaddha formed the western boundary of the field.³⁸ The home of the donee, the *ayrahâra* of Śrâddhika, is certainly the village of Sâdhli, situated according to the map north of Samrâ. I cannot find any trace of Gôlikâ. The villages mentioned in Kâ. are found, as I have shown in my paper, *ante*, Vol. V. p. 112, in the north-western corner of the Jambûsar Tâlukâ, south of the Mahî. The names of the political divisions of the Broach kingdom occurring in the inscriptions, are the *vishaya* or province of Bharukachchha (Kâ.), which seems to have included the whole northern half of the Broach District, i.e. the Tâlukâs of Jambûsar, Âmôd, Wâghrâ, and Broach, and possibly the adjoining Gaikwâdî Parganâs. It is not improbable that it was divided into a number of *dhâras* and *pathakas*; and that the *pathaka* of Kôrillâ (Na.) belonged to it. Further south we have the *vishaya* or province of Akrûrêśvara (Khê. I. II.) or Akulêśvara (I.) which comprised the large Tâlukâ of Auklêshvar and possibly pieces of the Rêvâkânthâ. Its southern boundary was no doubt, as at present, the Kîm river. For we shall see further on³⁹ that the Ôlpâd Tâlukâ and the Gaikwâdî districts north of the Taptî formed the Kâśakûla *vishaya*. Immediately south of the Taptî lay the Kamañya *bhukti*, which included 116 villages, (U.) or the Kârmañyâhâra (Chalukya inser.)

³⁵ *ante*, Vol. VII. p. 62. Dr. Bhagvânâlâl's conjecture, *ante*, Vol. XIII. p. 73, according to which Nândîpurî has to be identified with Nândôd, is not tenable. The word Nândôd has nothing to do with Nândîpurî, but is derived from Nandapadma. The town Nândôd is of modern origin and has no claim to any great antiquity. An examination of its temples which I made in 1875, showed this; and the Brâhmapas acknowledged it.

³⁶ Dr. Bhagvânâlâl, *loc. cit.*, thought that Kâyavatâra is the modern Kâvi. Against this identification speaks the fact that according to the phonetic laws of the Prâkrit dialects Kâyavatâra cannot become Kâvi, as well as the circumstance that according to the Rathêr inscription of Saka-Samvat 749 the old name of Kâvi was Kapikâ, which latter word is just the Sanskrit prototype we should expect. Kâyavatâra, literally "the incarnation of a son or descendant of Ka or Prajâpati," probably was a place of pilgrimage on the Narmadâ.

³⁷ See above, p. 212. With reference to the villages named in I., I have to offer the following remarks.—The village granted, Râva, is the modern Râyamâl in the Tâlukâ of Auklêshvar, in 21° 32' N. Lat. and 73° 52' E. Long., as the resemblance of the names and a comparison of the boundaries according to the inscription and the Trig. Surv. Map. Guj. Ser. No. 13 show. The boundaries are

according to the inscription.
east Vâranera
south the river Varanâ,
west Sunthavaḍaka.
north Aralua.

according to the map.
east Vâlnér.
south the Wâñl Khâri.
west Sâyan.
north Âlva.

The modern name Râyamâl is derived from Râivakamâlâ, 'the field of Râivaka, i.e. Sanskrit Râjivaka,' or perhaps the lotus (*reṇu*) field. The ancient name Râva is an abbreviation of Râivakamâlâ, made *bhîmarat*. The name Sâyan does not correspond to Sunthavaḍaka and the modern village Sâyan is probably a new settlement. The identifications of Vâranera and of the river Varanâ have already been correctly given by Dr. Bhâṇḍârkar in the prefatory remarks to his edition of I. He mis-read the names Râva and Aralua which Mr. Fleet first deciphered correctly. Mr. Fleet considered Râva to be a less probable reading than Raudham. But the modern name Râyamâl and its probable derivation from Sanskrit *râjivâ* show that the former is the correct one.

³⁸ Dr. Bhagvânâlâl was inclined to identify Dhâhaddha with the modern Dehad in the extreme north-east of the Pâñch Mahâls. This conjecture is exceedingly improbable, first because the distance of Dehad from Kôral is too large, secondly because the ancient name of Dehad or more correctly Dehvad, is according to the Chalukya inscription of Vikrama-Samvat 1196 and 1202, *ante*, Vol. X. p. 159, Dhadhîpadraka. ³⁹ See below, p. 197.

and further south-east the *dhāra* of Tatha-Umbarā (B.) or Bagumrā.

The extent of the kingdom was, therefore, in its best times not very large;⁴⁰ and it was reduced very considerably, as will be shown further on, in the seventh century. With this assumption agrees the fact that its princes were feudatories of some larger power. In Khê. I. and II., Dadda III. is called a *Sāmanta* 'or feudal baron' and the same title is found on the seal where it apparently refers to Dadda IV.-Prasāntarāga II., the donor of the grant. The position of Jayabhata IV. seems at first sight to be a little higher, as he calls himself in Kā. *Sāmantādhīpati*, 'the lord of great barons.' But he has also the title *samadhigatapañchamahāśabda*, 'he who has obtained the five mahāśabdas,' and the latter indicates that he was only a feudatory. The same epithet is also given in U., Ba. and I. to the *Mahārājādhirāja* Dadda II.-Prasāntarāga I., whence it may be inferred that he, too, in spite of his high sounding title obeyed or had obeyed some time or another, a paramount sovereign. The most probable explanation of the apparent contradiction between his two designations is, I think, that he had among his vassals one or several who bore the title *Mahārāja*, which, as e.g. the earlier Valabhi inscriptions⁴¹ show, was sometimes bestowed by paramount sovereigns on distinguished chiefs. In favour of this supposition speaks the fact that Jayabhata IV., too, ruled over *Rājas*, as he addresses his commands in Na. I. 17 to *Rājas*, *Sāmantas* and so forth. It is, of course, not absolutely impossible that Dadda II.-Prasāntarāga I. was at first a vassal and later gained independence, but nevertheless continued to use the epithet which he might have dropped. If that were so, it would be necessary to assume that the Gurjaras rose for some time to greater power. The period cannot have been a long one, because Dadda III. was again a *Sāmanta*. The question to whom the rulers of Broach owed allegiance, cannot as yet be answered with full confidence. It is not unlikely that at first

they were vassals of the Gurjaras of Bhīllamāla. Later their over-lords probably changed from time to time, as many kings of Central and Southern India tried to get a hold of the much-coveted garden of the West, and some among them succeeded, each for a shorter or longer period.

If we now turn to a consideration of the historical facts from the reigns of the several kings mentioned in the inscriptions, we must confess that we learn nothing of Dadda I. except the name.

Of the second prince, Jayabhata I.-Vitarāga I., it is said⁴² "that he displayed in the highest degree all the sportive qualities of the elephants of the quarters by expeditions in the forests growing on both shores of the ocean." As I have pointed out formerly,⁴³ the expeditions in the forests on both sides of the sea refer in all probability to wars in Gujarāt and in Kāthiāwād. For, when a Gujarātī speaks of the sea, he naturally thinks of the Gulf of Cambay. It seems therefore, that the relations between the chiefs of continental and peninsular Gujarāt were as strained in the fifth century A.D., as we shall find them to be in the sixth and the seventh, Jayabhata's epithet *Vitarāga*, literally 'he whose passions have disappeared,' further indicates that he was an adherent of one of the philosophical systems whose aim is the suppression of the human passions and the attainment of final liberation. He may have been a Vêdântist or a follower of the Sāṃkhya or even of the Śaiva or Bhāgavata *darśana*. It is worthy of note that his *virula* has hitherto not been found in the case of any king of another dynasty.

The surname of his son and successor, Prasāntarāga, 'he whose passions have been extinguished,' permits us to make the same inference which may be drawn from the epithet *Vitarāga*. Dadda II., no doubt, likewise inclined to the teachings of the ascetics. In his case this conclusion is confirmed by two other statements of the inscriptions. It is said of

⁴⁰ Sir A. Cunningham assumes, *Ancient Geography*, p. 327, that the kingdom of Bharukachchha was somewhat more extensive, and he chiefly relies on Hiuen Tsiang's statement, *Siyuki*, Vol. II. p. 239 (Beal), according to which *Pa-lu-kie-ch'ie-p'o* was 2400-2500 li or about 400 miles in circuit. But this estimate is very vague, as the form of the figure is not stated. The description of the country in the *Siyuki* seems to be inaccurate. It would

fit only the sterile districts on the sea coast, the so-called Bāl, not the rich and fertile soil of the Kānem. The name *Pa-lu-kie-ch'ie-p'o* corresponds, I think, to Bharukachchhapura, not to Bharukachchēva, as the usual transliteration is.

⁴¹ *ante*, Vol. IV. p. 107.

⁴² See below the text l. 8.

⁴³ *ante*, Vol. V. p. 111.

him, that "he illumined the world of the living by his pure precepts" and that "he possessed the supreme knowledge."⁴¹ The second phrase leaves no doubt that he had studied one of the philosophical systems, supposed to lead to *mōksha*. The assertion that he illumined the world by his pure precepts, may mean that he himself had composed a philosophical work or had caused one to be written in his name. It may, however, also refer to his zeal for the spread of his doctrines and indicate that he established *maths* and made the ascetics preach his and their faith among his people. In addition we learn from the inscriptions that he occupied the throne between the years 478-495 A.D. and that he assumed the title *Mahārāja-Abhirāja*, the probable meaning of which has been discussed above.

Dadda III., the first king named in Khê. I. and II., seems to have been a great warrior. The inscriptions say (II. 3-4), that he conquered the hostile family of the Nāgas, and (II. 9-10) that "the lands lying at the foot of the Vindhya hills gave him joy as if they were his wives carrying beauty on their high bosoms." Dr. Bhagvânâl has called attention to the fact that the first passage contains an allusion to a historical event, and he has also stated that it is difficult to decide which Nāgas are meant. Nāgavamsas ruled in Northern and in Central India, in Rājputāna and even in the South. In the absence of any specification the choice is difficult, and we must wait for further documents before we can come to a decision. As regards the interpretation of the second passage, which hitherto has not been noticed, it indicates without a doubt that Dadda III. made conquests out of Gujarāt. The Vindhya hills do not extend to the latter province, but end in the neighbouring Mālva, and it is probably a piece of the latter country which Dadda III. added for a time to the dominions of the Gurjaras. Whenever the rulers of Mālva were weak and those of Gujarāt felt strong, an attack from the Gujarāt side was the invariable consequence, and it sometimes was successful and led to temporary conquests. The position of Dadda III., viz. his being only a *Sāmanta*, has been mentioned above.

The description of the next king, **Jayabhāta II.-Vitarāga II.** yields no historical information. His *kirita* probably indicates that his religious inclinations were of the same kind as those of Jayabhāta I.

A great deal more is known about **Dadda IV.-Prasāntarāga II.** The inscriptions Khê. I. and II. shew that he occupied the throne during the years 628-633 A.D., which, as the dates of Kā. and Na. show, fell in the commencement of his reign, and that he was an adherent of the Sauras or worshippers of the Sun. Na. adds that he gained great fame by protecting the ruler of Valabhī against the supreme lord Śrīharṣadēva. The latter is, of course, Śrīharṣa-Harṣavardhana of Thāpēsar and Kanauj, who ruled over the whole of Northern and Central India during the greater part of the first half of the seventh century 606-648 A.D. At first sight it seems difficult to understand how the king of Valabhī whose capital lay west of Broach, could be attacked by a Central-Indian power before Broach had been subdued, and it seems still less intelligible how the ruler of a very small state, a mere *Sāmanta*, could afford protection against the armies of one of the most powerful kings of India. The first difficulty is, however solved by the Valabhī inscriptions. For a grant of Dharaśēna II., dated Samvat 270⁴² or 588-89 A.D., grants a village in the Khēṭakāhara, the district of Khēḍā, and thus proves that Gajarāt, north of the Mahī, had been annexed to Valabhī before the end of the sixth century. Hence the princes of Valabhī were in the seventh century the immediate neighbours of Mālva, which latter country was according to the *Śrīharṣa-charita*⁴³ a dependency of the great central empire. Śrīharṣa was, therefore, able to send an army against Valabhī without touching the Broach territory. The ancient road from Central India and Mālva to Khēḍā leads through the pass of Dēhad (Dadhīpadra). The second point, too, finds its elucidation partly through the Valabhī inscriptions and partly through some remarks in the writings of Hsien Tsiang. As Khê. I. and II. say nothing about the deed which reflected according to Na. great glory on Dadda IV., it appears that it was performed after 633-4 A.D. Between these

⁴¹ See below the text l. 11. ⁴² *ante*, Vol. VII. p. 70 ff

⁴³ *Śrīharṣa-charita*, p. 183, Kashmir edition.

years and the end of Śrīharsha's reign, two princes ruled in Valabhī, Dhruvasēna II., who issued a grant in [Gupta-Valabhī]-Samvat 319 or 628-9 A.D. and his son, the *paramabhattā* *śakunādīśjābhīrājaparamāścarachakravartin* Dhruvasēna IV., who, as his titles show, was the most powerful king of the dynasty. It is thus evident that Śrīharsha must have attacked one of these two princes. The remarks of Hsien Tsiang leave no doubt that it was Dhruvasēna II., who had to fly before the armies of the great king of Kanauj. He says, *Syuki*, II. p. 267 (Bedl), in his account of Valabhī,— "the present king is of the Kshatriya caste, as they all are. He is the nephew of Śilādityarāja of Mālava, and son-in-law of the son of Śilāditya *etc.* Śrīharsha the present king of Kanākubja. His name is Dhruvabhata¹⁷ (*T'ui-to-h'o-pa-tu*). He is of a lively and hasty disposition, his wisdom and state-craft are shallow. Quite recently he has attached himself sincerely to both in the three precious ones."

Again in the account¹⁸ of the great religious meeting, which Śrīharsha convened in 643 A.D. at Prayāga, *T'ui-to-pa-tu-h'a*, 'the king of Southern India,' is enumerated as one of the princes attending at Śrīharsha's command. Finally the same work informs us that *Pa-tu-h'a* together with Kumāra and other kings accompanied Hsien Tsiang on his departure from Śrīharsha's camp.

Hsien Tsiang's notes leave no doubt that Dhruvasēna II. occupied the throne of Valabhī at the time of his visit, and that he was connected with Śrīharsha by marriage and was his vassal. Taken together with these facts, the statement of Na. that Dadda IV. (Pr. Santaraga II.) protected the king of Valabhī who had been defeated by the supreme lord Śrīharshaditya, becomes both intelligible and perfectly credible. It is now easy to see that Śrīharsha extended, —some time between A.D. 633-34, the date of Khē II., and 640, the approximate date of Hsien Tsiang's visit to Gujarat,—his sway to Western India. He directed his attack, as a

matter of course, against Valabhī, the largest and most powerful state in Gujarāt, and defeated its ruler Dhruvasēna II. Dhruvasēna fled after his defeat to Broach and was sheltered by Dadda IV. From his place of refuge he made his peace with and his submission to his great foe, and was restored to his throne as a feudatory of the latter. The peace was cemented, as has happened in many similar cases, by a marriage of Dhruvasēna with Śrīharsha's granddaughter. With this supposition the magnitude of Dadda's feat is somewhat reduced, but it loses the appearance of absurdity which it has at first sight. Hsien Tsiang's statement that Dhruvasēna had quite recently attached himself to Buddhism, probably indicates that the subjugation and marriage of the king of Valabhī had occurred only a short time before his visit. Dhruvasēna's conversion to or inclination towards Buddhism has probably to be attributed to the influence of his connection with Śrīharsha, who, as is well-known, was possibly himself a Buddhist, or at least, a great patron of that sect.

A consideration of other Valabhī inscriptions and of the grants of the Gujarāt Chalukyas, teaches us that the reign of Dadda IV. was filled by more events than the Gurjara grants mention. These events were all untoward ones and led to a temporary annihilation and to a permanent weakening of the Gurjara kingdom. The friendly relations with the rulers of Valabhī do not seem to have lasted long. For we possess two grants of Dhruvasēna IV., the son and successor of Dhruvasēna II., which were both issued in the autumn of the year 648 A.D. from "the victorious camp situated at Broach." This date leaves no doubt that Dhruvasēna had made war on the king of Broach and had occupied his capital. The silence of Na. on this point proves nothing, as Indian inscriptions very rarely confess to a defeat of the princes by whose orders they were made. As the dates of Khē. I. and II. fall in the beginning of the reign of Dadda IV., it is very probable that he in person received this

¹⁷ The transcription is mine. Mr. Bedl gives *Chong-chi's* Dhruvapa¹⁷. The Chinese translation *Tchoungou* (St. Julien, *Mémoires*, II, p. 163) as I have shown *note* Vol. VII. p. 80, goes back to Dhruvabhata a common misspelling for Dhruvasēna.

¹⁸ St. Julien, *note de Hsien Tsiang*, p. 254. The identity of the two Chinese forms *Pa-tu-h'o-pa-tu* and *T'ui-to-pa-tu-h'a* is uncontested, because *tu* often represents the numeral *ta*, as has been recognised by M. St. Julien.

The title 'king of Southern India,' which is here given to Dhruvabhata may be explained by the circumstance that Śrīharsha did not reign over the Dekhan, and that Valabhī was one of the southernmost states subject to his control.

¹⁹ *Vol.* p. 260. The form *Pa-tu-h'a*, which appears also on p. 254 is the representative of *Bha'a*, an abbreviation of Dhruvabhata, made *blam* *not*.

extraordinary return for his kindness to Dhruvasēna II. The occupation of Broach by the ruler of Valabhī, however, cannot have lasted long; for Kā. and Na. prove the continuance of the Gurjara dynasty and their holding the province of Broach. Moreover a great political catastrophe seems to have happened in Valabhī soon after 648 A.D. The grants of this year are the last which, as far as we know at present, Dharasēna IV. issued. In Samvat 332 or 650-51 A.D., Dhruvasēna III., his youngest cousin twice removed, occupied his place.⁵⁰ Dharasēna IV. must, therefore, have died shortly after the issue of the two grants dated from Broach. As the youngest member of another branch of his family succeeded him, it is probable that he lost his life in consequence of an internal revolution. Such an event would, of course, present a favourable opportunity for the Gurjaras to regain their lost possessions.

About the same time as the conquest of Broach by Dharasēna IV., or perhaps a little earlier, happened the second misfortune which the Gurjaras had to suffer. This was the loss of the southern half of their dominions to the Chalukyas. We know at present of five Chalukya grants, belonging to the second, third and fourth quarters of the sixth century and to the second quarter of the seventh century, which show that during this long period the districts immediately north and south of the Taptī, the British Tālukā of Ōlpād and the Gaikwādī district of Kamrēj and Nausāri, belonged to branches of the great Chalukya dynasty of Bādāmi. These documents are (1) the Khēḍā grant of Vijayarāja or Vijayavarman, dated Samvat 394,⁵¹ (2) the Nausāri grants of the *Yuvarāja* Śīlāditya-Śrīśraya, dated Samvat 421,⁵² (3) the Surat grant of the same prince, dated Samvat 443, (4) the Balsār grant of Maṅgalarāja, dated Saka-Samvat 663, (5) the Nausāri grant of Pulakēśivallabha-Janāśraya, dated Samvat 495.⁵³ After what has been said by Dr. Bhagvānlāl and General Sir A. Cunningham, it may be considered certain that all these inscrip-

tions, excepting the fourth, are dated according to the Chēdi era, and that their dates correspond to the years 642-3, 669-70, 691-92, 731, and 738-39 A.D. As regards the family of the donors, Vijayarāja calls himself a Chalukya, and names a Jayasīṃha as his grandfather. His connection with the main line of Bādāmi is not stated. But the date of his grant makes it probable that his grandfather was the Jayasīṃha-Dharāśraya who is named in the Nirpaṇ grant,⁵⁴ and who was a younger brother of Pulakēśin II. of Bādāmi. The donors of the other four grants are brothers and sons of a younger son of Pulakēśin II. of Bādāmi, who was also called Jayasīṃha-Dharāśraya (see the Pedigree of the Chalukyas of Bādāmi and Gujarāt, on page 199). This Jayasīṃha received, as the grants hint, the province of Gujarāt from his brother Vikramāditya I. of Bādāmi, and handed over the administration to his son and heir-apparent Śīlāditya-Śrīśraya, who, it would seem, died before his father. Afterwards the succession to the Chalukya possessions in Gujarāt devolved on Jayasīṃha's second son Maṅgala or Maṅgalarasarāja, surnamed Vinayāditya-Yuddhamalla, and later on Pulakēśivallabha-Janāśraya. All these kings remained feudatories of the kings of Bādāmi in the Dekhan.

The village given away in the Khēḍā grant of Vijayarāja is Pariyaya, which lay east of the village of Sandhiyara and belonged to the province of Kāsakūla. Pariyaya is the modern Pariyā in the south-eastern corner of the Tālukā of Ōlpād; and Sandhiyara is now called Sandhier which lies a few miles further west on the local-fund road from Sāyan to Ōlpād.⁵⁵ The fact that the district on the northern bank of the Taptī was called Kāsakūla is also established by Dr. Bhagvānlāl's Rāthōr grant from Antroli-Chhārōli, which village is called in the inscription Sthāvarapallikā and is stated to belong to the province of Kāsakūla.⁵⁶ The Nausāri grant of Śrīśraya-

Bo. Br. R. I. 8. loc. cit.

⁵⁰ See *ante*, Vol. IX. p. 123ff.

⁵¹ See Trig. Survey Map, Guj. Ser. No. 14.

⁵² See *Journal Bo. Br. R. As. Soc.* Vol. XVI. p. 105.

The identification of Chhārōli with Sthāvarapallikā has been made by Dr. Bhagvānlāl. He omitted to mention that the village of Khareḍa is represented by the modern Khareḍa and the town of Kāśhāpurī by Kāḥor. All these places are to be found in the sheet of the Trig. S. Map, No. 14 in 21°, 11-20' N. Lat. and 72° 55-73' E. Long.

⁵³ A grant of Dhruvasēna III. bearing the date given, was in the possession of Dr. Bhagvānlāl Indrājī, to whom I owe the knowledge of its existence.

⁵⁴ The only reliable edition of this grant is Mr. Fleet's, see *ante*, Vol. VII. p. 248 ff.

⁵⁵ *Journal Bo. Br. R. As. Soc.* Vol. XVI. p. 1 ff.

⁵⁶ Grants Nos. 3 and 5 have been published by Dr. Bhagvānlāl Indrājī in the Verhandlungen des Siebenten Int. Orientalisten Congresses in Wien, Asiatische Section, p. 210 ff. The fourth grant has been described by the same scholar, *ante*, Vol. XIV. p. 75 and in the *Journal*

Śilāditya was issued at Navasārikā or Nausāri itself and disposes of the village of Asattigrāma, probably the modern Astgām,⁵⁷ south-east of Nausāri. Still more important is the geographical information of the Surat grant of Samvat 443 or 691-92 A.D. It was written in the vice-regal camp at Kārmaṇya or Kamrēj, and alienates a field of the village of Ōsumbhalā, west of Allūraka. Ōsumbhalā, is the modern Umbhēl⁵⁸ south of Kamrēj: and Allūraka is still called Alurā. It is thus evident that the Chalukyas had conquered the northern bank of the Tapti as early as 642-3 A.D. That indicates, just as Śilāditya's grants prove it clearly that the districts south of the Tapti were likewise lost to the Gurjaras. The date of Vijayarāja's inscription shows that this loss happened probably a little earlier than Dharasēna's invasion, and the long continuance of the Chalukya rule in southern Gujarāt proves that it was permanent.

If we now turn to the history of the remaining Gurjara princes, we learn about Jayabhata III. nothing beyond the name.

His son, Dadda V., is called in Na. Bāhusa-hāya, 'he whose only helper was his arm,' and a *paramamāhēśvara*, i.e. 'a most devout worshipper of Śiva.' His *birūda* indicates that he was a warlike prince and confirms the further statement that he bravely encountered in battle the lords of the East and of the West. The latter foe probably was the ruler of Valabhī; and the lord of the East may have been the Chalukya sovereign of Bālūmi. We can easily understand that both tried to annex the remainder of the Gurjara kingdom. Another assertion in the inscription, that Dadda V. studied the teachings (*pravachana*) of the great sage Maṃ, need not be taken too literally. But it is of interest, as it proves the popularity of the famous lawbook during the seventh century.

The last king of the Gurjara dynasty, known to us, Jayabhata IV. ruled according to Na. and Kā. between 705 and 734-35. The former inscription teaches us only that he was a *paramamāhēśvara*, like his father. The second

asserts that he quieted the impetuosity of the lord of Valabhī. The feud between Broach and Kāthiāvād thus appears to have continued. Jayabhata's opponent was either Śilāditya V. or Śilāditya VI. The grant of the first is dated (Gupta-Valabhī) Samvat 404 or 722-23 A.D., that of the latter was issued towards the end of his reign, in Samvat 441 or 759-60 A.D. In Jayabhata's reign fell also, it would seem, the great invasion of the Tājikas or Arabs, during which, as the grant of the Gujarāt Chalukya Pulakōśin states,⁵⁹ the enemy conquered, besides Sindh and Kachh, Kāthiāvād and the whole of Gujarāt as far as Nausāri. The Gurjara king is especially mentioned as one of the subjugated princes.

Regarding the further fate of the kingdom of Broach, we can surmise now with more confidence than formerly that it continued to exist until the complete conquest of Southern and Central Gujarāt by the Rāṭhōr Gōvinda III. about the year 800 A.D. The Rādhanpur grant⁶⁰ of the latter says that "on Gōvinda's approach the Gurjara fled in fear into some (unknown hiding-place) and did not even dream of meeting him in battle." The Barōḍā⁶¹ and Kāvi grants⁶² add that Gōvinda III. presented the province of Lāta, the country between the Mahī and the Tapti, to his brother Indra, whose descendants continued to hold it, as other inscriptions prove, against many foes for more than a hundred years. During Indra's reign the Gurjaras stirred once more and he gained, as verse 29 of the Kāvi plates says, victories over them. I was formerly (*ante*, Vol. V. p. 145) inclined to identify these Gurjaras with the Chāṇḍās of Aphilvād. It seems now more likely that the dispossessed rulers of Broach are meant, though it is possible that they may have been assisted by their northern clansmen. The latter appear later without doubt as the foes of the Rāṭhōrs. If the Bagumrā inscription⁶³ of Dhruva III. asserts that this prince had to encounter the powerful Gurjaras, nobody but the king of Aphilvād can be meant.

⁵⁷ Trig. Surv. Map, Guj. Ser. No. 35, 20° 53' North-Lat. and 73° 5' East-long.

⁵⁸ Trig. Surv. Map, Guj. Ser. No. 34, 21° 11' North-Lat. and 73° 1' East-long.

⁵⁹ Verhandlungen des Siebenten Orientalisten Con-

gresses, Asiatische Section, pp. 223-224, 236.

⁶⁰ *ante*, Vol. VI. p. 70.

⁶¹ *ante*, Vol. XII. p. 156, see especially verse 30, p. 163.

⁶² *ante*, Vol. V. p. 144, see especially verse 29, p. 150.

⁶³ *ante*, Vol. XII. p. 181.

PEDIGREE OF THE CHALUKYAS OF BADAMI AND GUJARAT.

(Compiled from Mr. Fleet's *Dynasties of the Kanarese Districts*
and Dr. Bhagvânâlâl Indráji's grants.)

A.—Bādāmi or main line.

Jayasimha I.

Rajarāga.

Pulikēśin I.

Kirtivarman I.
(567 A.D.)

Mangaliśa
(567-610 A.D.)

? Satyāśraya-Indravarman
(610 A.D.)

B.—First Gujarāt branch.

Pulikēśin II. (610-634). Vishnuvardhana I. (founder of the Eastern branch). Jayasimha-Dharāśraya.

Nāgavardhana. Buddhavarman.

Vijayarāja.
(642-3 A.D.)

C.—Second Gujarāt branch.

Ādityavarman. Chandrāditya. Vikramāditya I.
(670-680-1 A.D.)

Jayasimha-Dharāśraya.

Vinayāditya.
(681-696 A.D.)

Śilāditya-Śryāśraya.
(Yucarāja)
(669-692 A.D.)

Maṅgala, or.
Mangalarāja.
Vinayāditya-
Yuddhamalla.
(731 A.D.)

Pulakēśivallabha-
Janāśraya.
(738-39 A.D.)

TEXT.

First Plate.

- | | |
|---|--|
| 1 | ॐ स्वस्ति विजयविशेषात् भरुकच्छप्रद्वारवासकात् सकलयनपटलविनिर्गतरजनिकरकरावबोधित- |
| 2 | [कु]मुदधवल्यशप्रतापस्थगितनभोमण्डलानेकसमरसंकटप्रमुखगतनिहतशत्रुसामंतकुलावधुप्र- |
| 3 | भातशमयरुदितफलोद्दीयमानविमलनिस्त्रिशप्रतापो देवद्विजातिगुरुचरणकमलप्रणमोद्धृ- |
| 4 | वज्रामणिकोटिरुचिरविधितिविराजितमकुटोद्गासितशिराः दिनानाथातुराभ्यगताथी जनदिलष्टप- |
| 5 | रिपूरितविभवमनोरथापचीयमानतृविष्टपैकसहयधर्मसचयः प्रणयपरिकुपितमानिनी जन- |
| 6 | प्रणामपुर्वमधुरावचनोपपादितप्रसादप्रकाशिकृतविदग्धनागरकरवभावो विमलगुणपंजरक्षि- |
| 7 | सबहलकर्त्तातमरनिचय श्रीमद्वस्तस्य सुनु समक्षप्रतिद्विगजघटाभेदिनिस्त्रिशविक्रमप्रक- |
| 8 | दितमृगपतिाकसंरविथ्यवलेपः पथोनिधिकृत उभयतटप्ररुद्धनलेखविहृतनिरंकुशशानप्रवा- |

L. 1, read ॐ; व in वासकात् looks like न; read र-
जनी.—L. 2, कु in कुमुद is indistinct; read प्रमुखा-
गत; कुलवधु.—L. 3, read समय; प्रणामो.—L. 4, read
वज्र; दाधिति; मुकुटो; रा दाना; भ्यागता; ऋष्ट

L. 5, read रथोप; त्रिवि; सहाय; सचय;—L. 6
read पुर्व; मधुर; प्रकाशिकृत.—L. 7, read निचय;—
द्वि; सुनु.—L. 8, read किशोरवार्यो; निधिकृतो; प्ररुद्ध;
वनलेख.—

- 9 हप्रवृत्तिर्दन्तिविभ्रमगुणसमूहः स्फटिककपूरपिण्डपण्डुरयशश्चन्दनचञ्चिताङ्गः समुन्नतगग-
 10 नलक्ष्मिपयोधरोसंगः श्रीजयभट्टस्तस्यत्मज प्रतिहतसकलजगद्भाषिदोषाधिकारविजृम्भितसंत-
 11 तातमोवृत्तिरधिकगुरुस्नेहसंपत्कविमलदिशोद्गसितजिवलीकः परमबोधसमानुगतो विपुलगु-
 12 र्ज्जरनृन्मयप्रदिवतोमुपगतः समधिगतपंचमहाशब्दमहाराजाधिराजश्रीमद्वः कुशली सार्वा-
 13 नेव राष्ट्रपतिविषयपतिग्रामकुट्टायुक्तक्रान्तियुक्तकाधिकमहत्तरादींस्समाज्ञापयति अस्तु वो विदि-
 14 तं यथा मया मातापित्रोरात्मनश्चैवामुष्मिकपुण्ययशोभिर्वृद्धये कन्यकुब्ज-
 15 वास्तव्यतचातुर्विधसामान्यकौसिकस्यगोत्रच्छन्दोगसन्नहचारि-
 16 भट्टमहिधरस्तस्य मूनु भट्टगोविन्द बलिचरुवैश्वदेवामिहोत्रपञ्चमहायज्ञदिकु-

Second Plate.

- 17 योत्सर्पणर्थं तथ उम्बराहाराहलिश अन्तःपातितथ उम्बराग्रामोस्याघटनस्थनानि
 18 पुर्वत उविलथगधम इभिगत इधिराम पश्चिमतः संक्रियम उतरत जरवद्रम
 19 एवमयं स्वचतुराघटनविशुद्धो ग्रामः सोद्रेगः सपरिकर सवान्यहिरन्यादेयः
 20 सोत्पद्यमानविष्टिकः समस्तराजक्रियमप्रवेद्यमचन्द्रकर्णवभितिसरिस्पर्तसमानकालीनः पु-
 21 त्रौत्रान्वयकमोपमोग्यः पुर्वप्रत्तदेवप्रज्ञशयवज्जन्मन्तरसिद्धया शक्रनृपकालातीतसंवत्
 22 रगतचतुदये पंचदशाधिके यष्टिमावास्थसूर्यग्रहे उदकातिसर्गेण प्रतिपादितं यतोऽस्योचित-
 23 य ब्रह्मशयस्थित्या कृपतः कर्षयतो भुञ्जते भोजयतः प्रतिदिशतो वा न व्यासेधः प्रवर्तितव्यः तथागा-
 24 मिभिरपि नृपनिभिरस्मद्देश्यैर्वैसामान्यभूमिज्ञानफलभवेत्य बिन्दुः शैलान्यनित्यः न्यैश्वर्यणि नृ-
 25 पायलमज्जलविन्दुचञ्चलश्च जीवितनाकलद्य स्वशयनिर्विशेषोयमस्मदायोनुमन्तव्यः पालयि-
 26 तव्यश्च तथा चोक्तं बह्मिर्वसुधा भुक्ता राजनिः सगरादिभिः [I] यस्य यस्य यश भूमिस्तस्य तस्य तदा फ-
 27 लं [II] यश्चाज्ञानतिमिराज्ञानमतिराष्ट्रियाशच्छ्रियमानमनुमोदेता वा स पञ्चभिर्महापातकैरुपपातकैश्च
 28 संयुक्तः स्यादिति [I] उक्तं च भगवता वेदव्यासेन व्यासेन [I] षष्टि वर्षसहस्राणि स्वर्गे तिष्ठति भूमिदः [I] आ-
 29 च्छन्ता चातुमन्ता च तान्येव नरके वसेत् [II] यानोह वृत्तानि पुरातनानि दानानि धर्म्मार्थायसस्करा-
 30 णि [I] निरुक्तनाल्यप्रतिमानि तानि का नाम साधुः पुनराददीत [II] स्वदत्तां परदत्तां वा यत्नद्रश्न न-
 31 राधिपः [I] मही महीमतां श्रेष्ठ दानाच्छ्रेयानुपालनं [II] लिखितंश्चैतत्पादानुजीविदशामोरसुने-
 32 न रेवादिनेन स्वहस्तोयं मम श्रीवितरागानुतां श्रीप्रसन्तरागस्य [II]

REMARKS.

I add no translation, as the grant is so very similar to those Ilāo and Umētā

The only alterations in my former translation of the *Vamśāvali* which I think necessary, are :—

- (1) L. 1. *Sakala* must be construed with *rajanīkara* and be translated by 'full'

- (2) L. 7. *Nistriṃśa-vikrama* means with reference to the lion 'the pitiless paw,' not 'the pitiless jump.'

In the preamble of the grant I propose to read *niyuktakūrdhikamahattarādīnt* and to translate the last two words by 'the *kūrdhīs* the elders and so forth. The insertion of *t* at the end of *ādīnt*, i.e. *ādīnt*, is caused by the following *sa* and is archaic.

L. 9. read 'नृपवृत्तिः' 'क' 'र' 'पाण्डुर'.—L. 10. read 'लक्ष्मी' 'रोम्' 'मटस्तस्यात्मज'.—L. 11. read, 'तमो-वृत्तिर' 'द्वसित' 'जीव' 'समनुगत'.—L. 12. read, 'नृपान्व' 'मदीपना'—L. 13. read 'युक्तक्रान्तियुक्तकाधिक'.—L. 15. read 'तचातुर्वि' 'कौशिकसगोत्र'.—L. 16. read 'महीधर' 'गो-विन्दय' 'यज्ञादिक'—L. 17. The first sign is altogether misshapen and looks nearly like a modern योःन्म-पेणार्थः 'घाटनस्थानानि'—श in 'द्वलिश' is doubtful. L. 18. read 'पूर्वत' 'ग्रामो' 'ग्राम' 'उत्तरतो' 'ग्राम'—L. 19

read 'राघाट' 'मोपरिकर' 'हरण्या'—L. 20. read 'कीयाना-मप्रवेद्य आ' 'न्द्रार्को'—L. 21. read 'पूर्व' 'संवत्'—L. 22. read 'यष्टिमावास्याया' 'सूर्य' 'प्रतिपादित'—L. 23. read 'या'—L. 24. read 'श्रयोणि'—L. 25. दायो looks like दायो.—L. 27. read 'यश्चाज्ञान' 'मोदेत'—L. 28. read 'व्यासेन'—L. 29. read 'तान्येव' 'धैयशम्क'—L. 30. read 'यत्नद्रश्न'—L. 31. read 'राधिप' 'तं चैत'—L. 32. रेवादिनेन is probably meant for रेवादिन्येन ; read 'श्रीवान' 'मूनाः श्रीवशान्ते'

TWO INSCRIPTIONS FROM TERAHI; [VIKRAMA.] SAMVAT 960.

BY PROF. F. KIELHORN, C.I.E., GÖTTINGEN.

Mr. Fleet has supplied me with rubbings, received from Sir Alexander Cunningham, of the two short inscriptions, which I shall mark here A. and B., mentioned in *Archeological Survey of India*, Vol. XXI. p. 177. The import of these inscriptions is clear enough, and it is very different from what it has been supposed to be; but only the rubbing of A. suffices for editing the inscription in full.

A.

According to Sir A. Cunningham, this inscription is on a prostrate pillar, near a temple outside 'Têrahi,' a village on the 'Mohwar' river, in the state of Gwâlîor, Long. 78° 1' E., Lat. 25° 3' N., Indian Atlas, quarter-sheet 52 N. E. It consists of 5 lines. The writing covers a space of about 1' 3" broad by 4" high, and appears to be well preserved. The size of the letters is about $\frac{5}{8}$ ". The characters are Dêvanâgarî; and the language is Sanskrit.

The inscription is dated in the year 960, expressed by decimal figures only, on the fourth day of the dark half of the month Bhâdrapada, on Śani or Saturday. And it records that, on that day, there took place "here, on the **Madhuvêni**," or the stream Madhu, a fight between the *mahâsâmantâdhipatis*, the illustrious **Guṇarâja** and the illustrious **Undabhata**, in which the *kottapâla*, or guardian of the fort, the illustrious Châṇḍiṇa, an adherent or follower of Guṇarâja, was killed. The inscription closes with an Anuṣṭubh verse suitable to the occasion.

Referred to the Vikrama era the date, 960, taken as the year expired, or 961 current, Bhâdrapada va. di. 4, calculated by Dr. Schram's and Prof. Jacobi's tables, corresponds to **July 16th, 903 A.D., which was a Saturday, as required.** On that day, at sunrise, the fourth *tithi* of the dark half was current, and it ended about 14h. 53m. after mean sunrise. In 903 A.D. the solar month Bhâdrapada lasted from about sunrise of July 26th to about sunrise of August 26th, and since within that time there were two new-moons, one about 1h. 17m. before sunrise of July 27th, and the other about 7h. 35m. after sunrise of August 25th, there were in 903 A.D. two lunar months Bhâdrapada, and July 16th

was the fourth of the dark half of the first of these two months. The fourth of the second, or *adhika*, dark fortnight of Bhâdrapada would have been Monday, August 15.

By a singular coincidence, I have lately received from Dr. Burgess an impression of that "huge inscription," existing "somewhere in the state of Gwâlîor," which was mentioned in 1862 by Dr. F. E. Hall, in the *Jour. Beng. As. Soc.*, Vol. XXXI. p. 6, and which has been re-discovered by Dr. Burgess at **Sêrôn** (or **Siyadôni**, as it is called in the inscription itself), a place in the Lalitpur district of the North-Western Provinces, Long. 78° 23' E., Lat. 24° 50' N., Indian Atlas, quarter-sheet 70 N. W., about 27 miles S.E. of 'Têrahi.' And I am thus enabled to state that one of the two *mahâsâmantâdhipatis*, spoken of in the present inscription, is mentioned also in the Sêrôn inscription. For, in lines 4-6, that inscription records that during the reign of the *paramahatthîraka mahârâjâdhipâra paramêscara* **Mahêndrapâladêva**, who meditated on the feet of the *p. m. p.* **Bhôjadêva**, in the year 964 (expressed both in words and by decimal figures) on the third of the dark half of the month Mârgaśîras, the illustrious **Undabhata**, who is described as *mahâprâtihâra-samadhi-jatâśēshamahâśubha-mahâsâmantâdhipati*, being in residence at **Siyadôni**, made certain religious grants at that place. This statement is interesting, because it proves the correctness of my reading of the year of the present inscription, 960 (*not* 910), and because it shows that Undabhata was a general or feudatory of the paramount sovereigns of the country, the rulers of **Kanyakubja**. On the other hand, the date of the present inscription shows that the dates of the Sêrôn inscription must undoubtedly be referred to the Vikrama era.

The river **Madhu** or **Madhuvêni**, mentioned in the present inscription, I take to be the river 'Mohwar' of the maps, on which 'Têrahi' is situated.

B.

This inscription also is on a prostrate pillar, near the pillar which contains the inscription A. It consists of 5 lines. The writing covers a space of about 1' $\frac{1}{2}$ " broad by 3" high, and

it is, judging from the rubbing, not well preserved. The size of the letters is about $\frac{3}{4}$ ". The characters are Dêvanâgarî; and the language is Sanskrit.

Like A., this inscription also begins with a date, of which the words and figures *Sam. 960 Bhâdrapada ca. di. 4 Sanaischaradiâ'* are clear, but in which the figure 4 for the day is preceded by another figure which may be 1 or 2, and which may either have been struck out or may possibly have reference to the fact that in the year 960 Bhâdrapada, as I have shown above, was an intercalary month. Undoubtedly

the inscription refers to the fight, spoken of in the inscription A., of the illustrious **Guṇa-rāja** and **Undabhata**, whose names occur here in line 1. and it records the death in battle of another warrior, whose name ends in *varman* and who, in line 2, appears to be described as a *sāmanta* and *ācāpati*. The inscription also contains, in lines 2 and 3, the Anushtubh verse with which the preceding inscription ends, and which is followed here, in lines 3-5, by another verse (?), the exact words and import of which I am unable to make out from the rubbing.

TEXT OF INSCRIPTION A.¹

- 1 [Ôm]² Sam [1?]³ 960 Bhâdrapad[ê] va di 4 Sanau || Ady=êha Madhu-
vênyâm mahâsamanâtâ-
- 2 dhipati-śrī-Guṇarāja-Undabhata⁴ paraspam=bhaṇḍanā samjâtâ [1*] Ta-
- 3 tra cha śrī-Guṇarāja-padapadm-opajîvi kôtapâla-śrī-Chaṇḍiyanô
- 4 nâmâ(ma) vyâpiditah || Jitêna⁵ labhyatê lukshmi⁶ r⁷]=mrîten=âpi surâmganâ | ksha-
- 5 ṇa-vidhvamsinî(ni) kâṇḥ kâ chintâ maraṇê raṇê ||

FOLKLORE IN SOUTHERN INDIA.

BY PANDIT S. M. NATESA SASTRI, M. F. L. S.

No. XXV.—*Chandralêkhâ and the Eight Robbers.*

There was an ancient city named **Kaivalyam**, in the Pândya country, and in that city there lived a dancing girl named **Muttumôhanâ**. She was an excellent gem of womankind, for though born of the dancing-girls' caste, she was a very learned and pious woman, and never would she taste her food without first going and worshipping in the temple to Śiva. She moved in the society of kings, ministers and Brahmins, and never mingled with low people, however rich they might be. She had a daughter named **Chandralêkhâ**, whom she put to school along with the sons of kings, ministers and Brahmins. Chandralêkhâ showed signs of very great intelligence, even when she was beginning her alphabet, so that the master took the greatest care with her tuition, and in less than four years she began her lessons and became a great *ardritâ*. However, as she was only a dancing-girl by birth, there was no objection to her attend-

ing to her studies in open school till she attained to maturity, and, accordingly, up to that age she attended the school and mastered the four *Vêdas*, the six *Sâstras* and the sixty-four varieties of knowledge.

She then ceased to attend the school, and Muttumôhanâ said to her:—"My darling daughter, for the last seven or eight years you have been taking lessons under the Brâhman, your master, in the various departments of knowledge, and you must now pay a large fee to remunerate your master's labours in having taught you so much. You are at liberty to take as much money as you please from my hoard."

So saying she handed over the key to her daughter, and Chandralêkhâ, delighted at her mother's sound advice, filled up five baskets with five thousand *moḥars* in each, and setting them on the heads of five maid-servants, went to her master's house with betel leaves, areca-nut, flowers and cocoanuts in a platter in her

¹ From the rubbing.

² Expressed by a symbol.

³ This may be a sign of punctuation or it may possibly be the *akṣara* ni, struck out.

⁴ Metre, *Śloka* (Anuṣṭubh).—The first *akṣara* of *jitêna* appears to have been altered to *ji*, and one certainly expects *jitêna* for *jitêna*. Compare the well-known verse of the *Purâṇatantra*—

*Mâhâti sâcprâpyatê sâcprâjê jivâbhabhê kîrti-uttamâ |
Tad-ubhâ-âpi sâcprâjê, gâcprâ-âpi na durlobhâ ||*

The reading, however, is *jitêna* in inscriptions in Southern India also, e.g. in two *vepals* or monumental tablets of heroes at Balagâhve and Sorab in Mâsûr; *Pala Sanskrit*, and *Old-Kanarese Inscriptions*, Nos. 212, 225.—J. F. F.

hand, to be presented along with the money. The servants placed the baskets before the master and stood outside the house, while Chandralêkhâ took the dish of betel-leaves, nuts &c., and humbly prostrated herself on the ground before him. Then, rising up, she said: "My most holy *gurû* (master), great are the pains your holiness undertook in instructing me and thus destroying the darkness of my ignorance. For the last eight years I have been a regular student under your holiness and all the branches of knowledge hath your holiness taught me. Though what I offer might be insufficient for the pains your holiness took in my case, still I humbly request your holiness to accept what I have brought."

Thus said she, and respectfully pushed the baskets of *mohars* and the betel-nut platter towards the Brâhman. She expected to hear benedictions from her tutor, but in that we shall see she was soon disappointed.

Replied the wretched Brâhman: "My dear Chandralêkhâ do you not know that I am the tutor of the prince, the minister's son and several others of great wealth in Kaivalyam? Of money I have more than enough. I do not want a single *mohar* from you. But what I want is that you should marry me."

Thus spoke the shameless teacher, and Chandralêkhâ's face changed colour. She was horrified to hear such a suggestion from one whom she took till then to be an incarnation of perfection. But, still hoping to convince him of the unjustness of the request, she said: "My most holy master! The deep respect I entertain towards your holy feet is such that, though your holiness's words are plain, I am led to think that they are merely uttered to test my elasticity. Does not your holiness know the rules by which a preceptor is to be regarded as a father, and that I thus stand in the relationship of a daughter to your holiness? So kindly forget all that your holiness has said, and accepting what I have brought in my humble state, permit me to go home."

But the wretched teacher never meant anything of the sort. He had spoken in earnest, and his silence now and lascivious look at once convinced the dancing-girl's daughter of what was passing in his mind. So she quickly went

out and told her servants to take back the money.

At home Muttumôhanâ was anxiously awaiting the return of her daughter, and as soon as Chandralêkhâ came in without the usual cheerfulness in her face, and without having given the presents, her mother suspected that something had gone wrong, and enquired of her daughter the cause of her gloom. She then related to her mother the whole story of her interview with her old master. Muttumôhanâ was glad to find such a firm heart in her daughter, and blessed her, saying that she would be wedded to a young husband, and lead a chaste life, though born of the dancing-girls' caste. The money she safely locked up in her room.

Now, the Brâhman, in consequence of his disappointment, was very angry with Chandralêkhâ, and, that no young and wealthy gentleman might visit her house, he **spread reports** that Chandralêkhâ was **possessed by a demon** (*kuttichchatti*). So no one approached Chandralêkhâ's house to gain her love, and her mother was much vexed. Her great wish was that some respectable young man should secure her daughter's affections, but the master's rumours stood in the way. And thus a year passed and the belief that a *kuttichchatti* had possessed Chandralêkhâ gained firm ground.

After what seemed to these two to be a long period a sage happened to visit Muttumôhanâ's house, and she related to him all her daughter's story. He listened and said, "Since the belief that a demon has taken possession of your daughter has taken firm hold of the citizens, it is but necessary now that she should perform (*pûjâ*) **worship to the demon-king** on the night of the new-moon of this month **in the cremation-ground**. Let her do this and she will be all right, for then some worthy young gentleman can secure her affections.

So saying the sage went away, and his advice seemed to be reasonable to the mother. She very well knew that no such demon had possessed her daughter, but that it was all the master's idle report. But still, to wipe away any evil notion in the minds of the people she publicly proclaimed that her daughter would perform *pûjâ* in the cremation-ground at mid-

¹ There would of course be no real marriage between a dancing girl and a Brâhman. Hence the insult.

night at the next new-moon.² Now, it is always the rule in such rites that the person who is possessed should go **alone** to the cremation-ground, and, accordingly, on the night of the next new moon, Chandralêkhâ went to the burning-ground with a basket containing all the necessary things of worship and a light.

Near Kaivalyam, at a distance of five *kûs* from it, was a great forest called *Khândacam*. In it there dwelt eight robbers, who used to commit the greatest havoc in the country round. At the time when Chandralêkhâ proceeded to the cremation-ground, these eight robbers also happened to go there to conceal what they had stolen in the earlier part of that night. Then, being relieved of their burden, they determined to go to some other place to plunder during the latter half of the night also. When Chandralêkhâ heard the sound of footsteps at a distance she feared something wrong, and, covering up her glittering light by means of her empty basket concealed herself in a hollow place. The thieves came and looked round about them. They found nobody, but, fearing that some one might be near, one of them took out an instrument called **kannakkôl**, and, whirling it round his head, threw it towards the east. This *kannakkôl* is the instrument by which these robbers bore holes in walls and enter buildings, and some robbers say they got it from a thunderbolt. During a stormy day they make a large heap of cow-dung, into which a thunder-bolt falls and leaves a rod in the middle, which is so powerful that it can bore even through stone-walls without making any noise. It has also the attribute of obeying its master's orders. So when the chief of the eight robbers threw his *kannakkôl* towards the east, true to its nature, it came into the hole in which Chandralêkhâ was lurking, and began to pierce her in her back. As soon as she felt it, she dragged it out by both her hands without making the slightest noise, and, throwing it under her feet, stood firmly over it. The robbers, having concealed the eight boxes of wealth they had brought with them in the sands near the cremation-

ground, went away to spend the remaining part of the night usefully in their own fashion.

As soon as the robbers had left the place Chandralêkhâ came out, and, taking possession of the robbers' rod, took out the eight boxes that the robbers had buried. With these she quickly hastened home, where her mother was awaiting her return. She soon made her appearance, and related all that had occurred during the night to her mother. They soon removed the contents of the boxes and locked them up safely. Then, taking the empty boxes, she filled them up with stones, old iron and other useless materials, and, arranging them two and two by the side of each leg of her cot, went to sleep on it.

As the night was drawing to a close, the robbers, with still more booty, came to the ground, and were thunderstruck when they missed their boxes. But as the day was dawning they went away into the jungle, leaving the investigation of the matter to the next night. They were astonished at the trick that had been played upon them and were very anxious to find out the **thief who had outwitted thieves**. Now they were sure that their boring-rod, which they had aimed against the unknown person who might be lurking in the *smâśānam* (cremation-ground), must have wounded him. So one of them **assumed the guise of an ointment-seller**,³ and, with some ointment in a cocoanut-bottle, began to walk the streets of Kaivalyam city, crying out "Ointment to sell. The best of ointments to cure new wounds and old sores. Please buy my ointment." And the other seven thieves assumed seven different disguises and also went wandering round the streets of the city. A maid-servant of Chandralêkhâ had seen that her mistress was suffering from the effects of a wound in her back, and never suspecting a thief in the medicine-seller, called out to the ointment-man, and took him inside the house. She then informed Chandralêkhâ that she had brought in an ointment man, and that she would do well to buy a little of his medicine for her wound. The clever Chandralêkhâ at once recognised the thief in the

² In stories of a master falling in love with the girl he has been teaching, he is usually himself made a soothsayer. In that capacity he asks the guardian (father or mother) to put the girl in a light box, and to float her down a river. The girl in the box is taken by a young man, sometimes a prince, and becomes his wife. A tiger or a lion is then put into the box, and when the teacher, a

great way down the river, takes the box and wishes to run away with the girl inside, he is torn to pieces, as a fit reward for his evil intentions, by the beast. But here the story takes a different turn.

³ From this point up to the end we shall find the story to be similar to "Ali Bâbâ and the Forty Thieves" in the *Arabian Nights*, though the plot is different.

medicine-vendor, and he too, as he was a very cunning brute, recognised in the young lady the thief of his boxes, and found her wound to be that made by his boring-rod. They soon parted company. The lady bought a little ointment, and the thief in disguise, gladly giving a little of his precious stuff from his cocoanut bottle, went away. The eight thieves had appointed a place outside Kaivalyam for their rendezvous, and there they learnt who had robbed them of their treasure. Not wishing to remain idle, they chose that very night both to break into Chandralêkhâ's house and bring away herself and their boxes.

Chandralêkhâ, too, was very careful. She locked up all the treasures and kept the eight boxes filled with rubbish, so as to correspond with their original weights, under the cot which she slept, or rather pretended to sleep, that night. The thieves in due course made a hole into her bedroom and entered. They found her to all appearance sound asleep, and to their still greater joy they found beneath her cot their eight boxes.

"The vixen is asleep. Let us come to-morrow night and take her away; but first let us remove our boxes." So saying to each other, they took their boxes, each placing one on his head, and returned in haste to their cave which they reached early in the morning. But when

they opened the boxes to sort out their booty, astonishment of astonishments, their eyes met only broken pieces of stone, lumps of iron and other such rubbish. Every one of them placed his forefinger at right angles to the tip of his nose, and exclaimed:—"Ah! A very clever girl. She has managed to deceive us all. But let this day pass. We shall see whether she will not fall into our hands to night."

Thus, in wonder and amazement, they spent the whole day. Nor was Chandralêkhâ idle at her own house. She was sure she would again see the robbers in her room that night, and, in order to be prepared for the occasion, she made a **small sharp knife** out of the robber's rod and kept it beneath her pillow, in the place where she was accustomed to keep her purse containing a few betel leaves, nuts, *chupam*, &c., to chew. The night came on. Early Chandralêkhâ had her supper and retired to bed. Sleep she could not, but she cunningly kept her eyelids closed and pretended to sleep. Even before it was midnight the eight thieves broke into her room, saying to themselves:—"This clever lady-thief sleeps soundly. We will do her no mischief here. Let us range ourselves two and two at each leg of her cot and carry her away unconscious to the woods. There we can all ravish her and kill her."

(To be continued).

MISCELLANEA.

A NOTE ON THE EPOCH AND RECKONING OF THE SAKA ERA.

General Sir A. Cunningham's Tables,¹ and Ganpat Krishnaji's and Kero Lakshman Chhatre's almanacs, shew the period from the 5th April, A.D. 1886, to the 24th March A.D. 1887, as corresponding to Śaka-Samvat 1808. So, also, the Śâyana-Pañchāṅg shews the same period, as corresponding to Saka-Samvat 1808, as

¹ The proper method of applying his Tables may perhaps be inferred from his remarks (e.g. *Indian Eras*, pp. 5, 48, 52) that the numbers of the years in Hindu dates refer to years actually elapsed; and that the Hindus count only by completed years. But I am speaking of the meaning which the Tables present to a general reader, at first sight. Thus, anyone turning to his Table XVII. p. 199, to which there is not attached a note that the Hindu years given therein are expired years,—in order to ascertain the Śaka equivalent of A.D. 1886-87, finds Saka-Samvat 1808; and naturally takes it as a current year. So, also, with any similar Tables: e.g. those in Mr. C. Patell's *Chronology*. Such Tables would be much more useful for general purposes, if they shewed the current Hindu years opposite the current Christian years, as is done in the case of the

the ordinary *nirayana* luni-solar year: the period covered by Śaka-Samvat 1808, as a *śâyana* year, being from the 6th March, A.D. 1886, to the 22nd February, A.D. 1887. For all purposes of calculation, however, this Śaka year has to be taken as "the year 1808, expired;" even if² we were working out the very first day of it, Chaitra śukla 1. The Tables are intended for this application of the number: and there are, in fact, no

samvatsars of the two cycles of Jupiter: leaving it to anyone who has to make a particular calculation, to take the preceding year as the basis of his work. And, in ordinary writing, the current Hindu years should certainly be quoted with the current Christian years.

² Unless with Tables based on the *M'sha-Sankranti*, or entrance of the sun into Aries, as Prof. K. L. Chhatre's Tables are: in which the Śaka year is practically treated as commencing with the day of the *M'sha-Sankranti*. With such Tables, for any *tithi* connected with Saka-Samvat (1809 current and) 1808 expired, up to the *tithi* that coincided with the solar day on which the *M'sha-Sankranti* occurred, we must work with the basis of even one year still earlier, viz. Saka-Samvat 1807 expired.

grounds for doubting that the above period really is equivalent to Śaka-Samvat 1808 expired, and 1809 current. But it is quoted, for all ordinary purposes, simply as Śaka-Samvat 1808. And, if a Hindu were converting "Saturday, the 1st January, A.D. 1887," into its corresponding Hindu date, he would write down, as the result, "Śakē 1808 Pausa śukla saptamī Śanivāra:" in which, not only does he abstain from including any word meaning "expired," but he actually uses, instead even of the crude form *Saka*, the Sanskrit locative *Śakē*, which literally means "in Śaka (1808)," i.e. "while Śaka 1808 is current;" and this is the meaning which the mention of the year presents to any Hindu who is not an astronomer, and who is not acquainted with the technical application of the number of the year. So, also, the same expression is used in the almanacs themselves, thus, in the first two almanacs mentioned above, "Śakē 1808 Vyaya-nāma-samvatsarē," on the title-page; and "Śakē 1808 Chaitra-śukla-pakṣah," on the top of the page which exhibits the bright fortnight of the month Chaitra; and, in the *Śigāna-Pañchāṅg*, "Śālivāhana-Śakē 1808 Vyaya-nāma-samvatsarah," on the title-page, and elsewhere "amāntaḥ Chaitra-śukla-pakṣah Śālivāhana-Śakē 1808 Vyaya-nāma-samvatsarah." In the same way, I find, for the same period, "Śakē 1808 Vyaya-nāma-samvatsarē" on the title-page of an almanac published at Pandit Umacharan Muhatmim's Press at Gwālior; and for the period from the 17th March, A.D. 1885, to the 4th April, A.D. 1886, "Śālivāhana-Śakē 1807," on the title-page of the Jōḍhpur *Chandā-Pañchāṅg* for that year, and "Śri-Samvat 1942 Śakē 1807 Chaitra-śukla-pakṣah," in Bapu Deva Shastri's almanac, prepared at Benares and published at Lucknow.

Again, in the preliminary passages that introduce the *saṁvatsara-phala* or 'astrological' results for the year, and other similar matter, Ganpat Krishnaji's and K. L. Chhatre's almanacs contain the passage—*atha-gata-Kaliḥ 4987, śeṣha-Kaliḥ 427013, Svasti, śrīman-nṛipa-Vikramārka-samay-ātita-samvat³ 1942, Hēmalamba-nāma-samvatsarē: tathā śrīman-nṛipa-Śālivāhana-Śakē 1808, Vyaya-nāma-samvatsarē, asmin varṣhē rājā chandrah*,—"now the expired *(portion of the*

Kali *(age) (is) 4987 (years): (and) the remainder of the Kali (age) (is) 427013 (years). Hail! In the year 1942 expired from the time of the glorious king Vikramārka,⁴ (and) in the Hēmalamba *saṁvatsara*, so also in the Śaka *(year) 1808 of the glorious king Śālivāhana, (and) in the Vyaya *saṁvatsara*: in this year, the king (is) the Moon.*" And, for the *nirayana* year, the *Sāyana-Pañchāṅg* for Śaka-Samvat 1808 has—*Kaliyugasya gata-varṣhāpi 4987: śrīman-nṛipa-Vikramārka-samvat⁵ 1943 Vilambi-samvatsarah: śrīman-nṛipa-Śālivāhana-Śak-ābdah 1808 Vyaya-nāma-samvatsarah: ath-asmin varṣhē rājā chandrah*,—"the expired years of the Kaliyuga *(are)* 4987, in the year 1943 of the glorious king Vikramārka, *(there is) the *saṁvatsara* named Vilambi: (and there is) the year 1808 of the Śaka of the glorious king Śālivāhana, (and) the *saṁvatsara* named Vyaya: now, in this year, the king is the Moon.*" In these passages, these three almanacs again treat the Śaka year, apparently, as a current year. The Gwālior almanac, however, which I have quoted above, has—*gata-Kaliḥ 4987, śeṣha-Kaliḥ 427013*
.; tan-madhye gata-Sakah 1808, śeṣha-Śakah 16192 Svasti: śrī-Vikramārka-rājya-samayād atit samvat⁶ 1943, Śaka-gata-varṣhēṣhu 1808, chandra-mānēna Vyaya nāma-samvatsarē: Bārhaspatya-mānēna, Śakē 1807 Āśvina-kṛishṇa-7 Śukrē sūry-odayād gata-ghaṭishu 47 palēshu 24 tad-avadhī, Sakē 1808 Āśvina-kṛishṇa-14 Bhaumē ghaṭi[shu] 46 palē[shu*] 3 tāvat-paryantah, Vilambi-samvatsar-ōllēkhah vidhēyah, tad-agrē Vikāri-samvatsar-ōllēkhah kāryah: Chaitra-ādau rājā chandrah*,—"the expired *(portion of the) Kali (age) (is) 4987 (years), (and) the remainder of the Kali (age) is 427013 (years),*; in it, the expired *(portion of the) Śaka (era) (is) 1808 (years), and the remainder of the Śaka (era) (is) 16192 (years),* Hail! In the year 1943 expired from the time of the reign of the glorious Vikramārka, *(and) in the expired Śaka year 1808, (and), by the lunar reckoning, in the (current) *saṁvatsara* named Vyaya,⁷—by the reckoning of Jupiter, the Vilambi *saṁvatsara* is to be used in writings from the expiration of 47 *ghaṭis*, 24 *palas*, from sunrise on Friday, the seventh lunar day of the dark fortnight of Āśvina, Śaka 1807,**

³ i.e. *saṁvatsar³*, or *saṁvatsar³shu*.

⁴ It is curious that here the Vikrama year should be distinctly specified as expired, while the Śaka year is not qualified in the same manner, as if a distinction were being made in the method of reckoning the two eras.

⁵ i.e. *saṁvatsar⁵*, or *saṁvatsar⁵shu*.—The figures here, and in the Gwālior almanac, 1943, differ from those in Ganpat Krishnaji's and K. L. Chhatre's almanacs 1942, because the latter quote the southern reckoning by which each Vikrama year commences with the month

Kārttika, seven lunations later than the same year in the northern reckoning: consequently, at the commencement of Śaka-Samvat 1808 (expired), on the first day of the bright fortnight of Chaitra, Vikrama-Samvat 1942 was still running, by the southern reckoning.

⁶ i.e. *atit samvatsar⁶*, or *atit⁶shu samvatsar⁶shu*.

⁷ The context is "at the beginning of Chaitra, the king (is) the moon," a little further on. The intervening matter is by way of a parenthesis.

up to (the expiration of) 46 *ghaṭīs*. *palas* (from sunrise) on Tuesday, the fourteenth lunar day of the dark fortnight of Āsvinā, in Śaka 1808; after that, the Vikārin *saṁvatsara* is to be used in writings,—at the beginning of Chaitra, the king (is) the Moon." Passages of a similar kind with those quoted above, occur at the end of each almanac, in connection with the *Saṁkrāntis*.

In the same passages for the *sāyana* year, Śaka-Saṁvat 1808, the *Sāyana-Pañchāṅg* does not confine itself to any indefinite expression, but explicitly quotes the Śaka year as a current year; thus — Kaliyugasya samdhyāyā āditāḥ, Śālivāhana-Śak-ārambhakāla-paryantam, Nand-ādr-indu-guṇa-(3179)-mitāni saura-varshāṇy=atitāni; pravartamāna-Śālivāhana-Śak-ābdaḥ aṣṭ-ōttar-āṣṭādaśa-(1808)-mitaḥ; amum saṁvatsaram Narmadāyā dakṣiṇa-bhāge Vyayanaṁnā vyavaharanti, uttara-bhāgē cha Vilambinaṁnā; ath-āsmin varshē rājā Śaniḥ,—“from the commencement of the *samdhyā*⁸ of the Kaliyuga, up to the time of the commencement of the Śālivāhana-Śaka, there expired solar years which are measured by the (nine) Nandas, the (seven) mountains, the (one) moon, and the (three) qualities, (3179); (and) the current year of the Śālivāhana-Śaka is measured by eighteen hundred, increased by eight, (1808); on the south side of the Narmadā, they distinguish this *saṁvatsara* by the name of Vyaya; and, on the north side, by the name of Vilambin; now, in this year, the king (is) Saturn.” But, in the corresponding passage in the same almanac for the preceding year, Śaka-Saṁvat 1807, after giving in the same words the number of the solar years that had expired from the commencement of the *samdhyā* of the Kaliyuga up to the commencement of the Śaka era, the text runs—tatō vartamāna-vatsar-ārambhakāla-paryantaisapt-ōttar-āṣṭādaśa-śata-(1807)-mitāni varshāni gatāni; amum vartamāna-saṁvatsaram Narmadāyā dakṣiṇē bhāgē Pārthiva-nāmnā vyavaharanti, uttare bhāgē cha Hēmalamba-nāmnā; ath-āsmin varshē rājā Bhau-mah,—“from then, up to the commencement of the current year, there have expired years which are measured by eighteen hundred, increased by seven, (1807); on the south side of the Narmadā, they distinguish this current *saṁvatsara* by the

name of Pārthiva; and, on the north side, by the name of Hēmalamba; now in this year, the king (is) Mars.”⁹ In passing, therefore, from Śaka-Saṁvat 1807 to 1808, a verbal distinction, at least, was made between expired and current years; and the phraseology adopted in the almanac for Śaka-Saṁvat 1808, has been repeated in the almanac for the next year, 1809. In one instance, A.D. 1885-86, the Pārthiva or Hēmalamba *saṁvatsara*, each current, was treated as equivalent to Śaka-Saṁvat 1807 expired; while, in the other, A.D. 1886-87, the Vyaya or Vilambin *saṁvatsara*, each current, and each the next in the cycle after respectively Pārthiva and Hēmalamba, is treated as equivalent to Śaka-Saṁvat 1808 current. What were the reasons for this change. I do not know; and I will leave it to Mr. Sh. B. Dikshit one of the editors of the almanac, to explain them. But, by the literal interpretation of the phraseology for A.D. 1885-86, and in accordance with the principles of the Tables, that period was equivalent to Śaka-Saṁvat 1807 expired, (and 1808 current); and A.D. 1886-87 should have been described as being represented by Śaka-Saṁvat 1808 expired, (and 1809 current).¹⁰

I have now to quote the fact that, in Madras, the same English period, A.D. 1886-87, is actually called Śaka-Saṁvat 1809, with the same *saṁvatsara* of the Sixty-Year Cycle, Vyaya, attached to it. There are, it is true, two somewhat varying practices to be found in Southern India. Thus, the Telugu Siddhānta-Pañchāṅgam, published, I think, in the Arcot District, gives the luni-solar period from the 5th April, A.D. 1886, to the 24th March, A.D. 1887, as being the Vyaya *saṁvatsara*, and as corresponding to Śaka-Saṁvat 1808 expired; and, at the commencement, it quotes the expired years throughout; thus—Kaliyuga-gat ābdāḥ 4987; Śālivāhana-Śaka-gat-ābdāḥ 1808; Vikramarka-Śaka-gat-ābdāḥ 1943. But, on the other hand, the Telugu Calendar, published at Madras, gives the same luni-solar period, from the 5th April, A.D. 1886, to the 24th March, A.D. 1887, as being the Vyaya *saṁvatsara*, and as corresponding to Śaka-Saṁvat 1809, Kaliyuga-Saṁvat 4988, and Vikrama-Saṁvat 1944, which are not specified as either current or expired, but can only be

⁸ *samdhyā*, which is usually translatable by ‘morning or evening twilight,’ means, as applied to any of the four ages, a long period that runs at the commencement of each, before the full development of the age itself. The *samdhyā* of the Kali age is one hundred divine years, equivalent to 36,000 years of men, so that we are still only in this period. The age itself will run for 360,000 years of men. And it will end with a *samdhyā* of 36,000 years of men. These figures make up the total of 432,000 years in the age.

⁹ Except for reading *amum vartamāna-vatsaram*, and

omitting *atha* before *asmā varshē*, the text is exactly the same in Bapu Deva Shastri's almanac for Śaka-Saṁvat 1807. I have not been able to obtain a copy of his almanac for the next year.

¹⁰ I had drawn Mr. Sh. B. Dikshit's attention to the circumstances of the case. And I now find that, in their almanac for Śaka-Saṁvat 1810 (expired) (A.D. 1888-89), the editors of the *Sāyana-Pañchāṅga* have reverted to the phraseology used in their almanac for Śaka-Saṁvat 1807 (expired).

intended as current. And, in the same way, the Tamil *Siriya-Pañchāṅgaṁ*, for the following year, published at Madras, gives the solar period from the 12th April, A.D. 1887, to the 11th April, A.D. 1888, as being the Sarvajit *saṁvatsara*, and as corresponding to Śaka-Samvat 1810, Kaliyuga-Samvat 4989, and Vikrama-Samvat¹¹ 1935, which, similarly, are not specified as either current or expired, but can only be intended as current.¹² And, from other indications, there seems to be no doubt that, of these two practices of Southern India, thus illustrated, the popular and generally current one is the latter one, by which the period A.D. 1886-87, is quoted as Śaka-Samvat 1809; the reckoning, in this and the other eras, being thus, at first sight, one year in advance of the customary reckoning of Northern and Western India.

The difference, however, is only an apparent one; and is due to the evident fact that the Madras reckoning has preserved the system of current years, while the other is regulated by expired years. But it is almost always the reckoning of Northern and Western India that is now quoted. And the years of it, though really expired years, are not distinctly and habitually quoted as such. And hence there is a general understanding that, as between the Śaka and the Christian eras, the additive quantity, to be applied to the former, is 78-79,¹³ and that the epoch or year 0 of the Śaka era, is the period from the 3rd March, A.D. 78, to the 20th February,

¹¹ Here the 3 in the tens place must be a mistake for 4.

¹² It would appear that the Tamil *Śākya-Pañchāṅgaṁ*, published at Madras, gives the solar period from the 12th April, A.D. 1887, to the 10th April A.D. 1888, as being the Sarvajit *saṁvatsara*, and as corresponding to Śaka-Samvat 1809, Kaliyuga-Samvat 4988 and Vikrama-Samvat 1935; all of which are distinctly specified as current. But this cannot possibly be correct, in respect of the Śaka and Kaliyuga years.

¹³ Thus, even Dr. R. G. Bhandarkar,—through whose "Note on the Śaka Dates and the Years of the Bārhaspatya Cycle, occurring in the Inscription" (*Early History of the Dekkan*, p. 195ff.) my attention was first drawn to the desirability of examining the details of the abinnams,—has written (*ibid.* p. 99; the italics are his) "191 Gupta *post* + 242 = 433 Śaka *current* + 78 = 511 A.D. *current* 209 Gupta *post* + 242 = 451 Śaka *current* + 78 = 529 A.D. *current*." I myself had the same view, till not very long ago. Other writers could easily be-hewn to have lain under the same mis-conception. And Dr. Burnell even went so far as to say (*South-Indian Palæogeography*, p. 72, note) "the rough equation for converting this era into the Christian date, is + 78½. The beginning of the year being at the March equinox, if the Śaka *atli*" (i.e. expired) "year be mentioned the equation is + 79½."

¹⁴ I owe these four dates to Mr. Sh. B. Dikshat. Gen. Cunningham (*Indian Eras*, p. 139) gives from the 14th March, A.D. 78, to the 17th February, A.D. 79, and from the 18th February, A.D. 79, to the 8th March, A.D. 80. But a comparison of his initial days for the epoch and the first year, shews at once that there is some mistake. The 18th February is twenty-four days

A.D. 79, both included; and its commencement, or first current year, the period from the 21st February, A.D. 79, to the 10th March, A.D. 80, both included.¹⁴ This, however, really gives current Christian years, equivalent to expired Śaka years. It is evident from the details given above regarding Śaka-Samvat 1808 and 1809, that, according to the reckoning of the era as fixed by the early astronomers, and as preserved to the present day, the true epoch is A.D. 77-78, and the period from the 3rd March, A.D. 78, to the 20th February, A.D. 79, is in reality the commencement, or first current year; and that, to obtain current Christian years, equivalent to current Śaka years, the true additive quantity is 77-78. But, of course, there is always the possibility that, if ever we obtain a date, with full details for calculation, in a very early Śaka year, or in one of the very earliest of the regnal or dynastic years which afterwards developed into the Śaka era, this exact equation may not hold good; in consequence of the date belonging to a period anterior to the adoption of the era by the astronomers.

The Śaka era is emphatically one of the eras that originated in an extension of regnal or dynastic years. The chief Hindu tradition about it, is, that it was founded in celebration of a defeat of the Śaka king by the king Vikrama or Vikramāditya who is also the supposed founder of the Vikrama era, commencing a hundred and thirty-five years earlier.¹⁵ This tradition is

earlier than the 14th March; whereas the difference should be only eleven days. Mr. C. Patell (*Chronology*, p. 96) does not give the initial day of the epoch; but gives, in the same way, the period from the 18th February, A.D. 79, to the 8th March, A.D. 80, for the first year.

¹⁵ Another tradition (e.g. *Prinsep's Essays*, Vol. II. Useful Tables, p. 154) is that the era dates from the birth of Śāhivāhana, king of Pratishthāna, who opposed Vikramāditya, king of Ujjayini. But the introduction of the name of Śāhivāhana in connection with the era, is of comparatively modern date, the earliest instance that I have succeeded in obtaining, being one of the thirteenth century A.D.; and the epigraphical instances speak of the year as having been "established, settled, or decided" (*niṣṭhita*) by Śāhivāhana, but not as running from his birth (see *ante*, Vol. XII, p. 214f.)—A passage to the latter effect has been quoted by Prof. Max Müller (*India; What can it teach us?* p. 300 f.) from the *Mahābhārata-vivaraṇāmārtanda* of Nārāyaṇa, which means "in the year measured by three, the (nine) numerals, and the (fourteen) Indras, from the birth of Śāhivāhana (i.e. in Śaka-Samvat 1493), in (the month) Tapas (Māgha), this *Mārtanda* was composed"—As Prof. Max Müller has pointed out, in his comments on this passage, it is not exactly wrong to speak of the era as the Śāhivāhana-Śaka or Śāhivāhana era: for there are ample instances in which the Hindus gave it that name, in epigraphical records of authority and of some antiquity. At the same time, those instances shew that it was only in comparatively modern times that the name of Śāhivāhana came to be connected with the era. And in all discussions respecting early dates, it is an anachronism, and a mistake, to call the era by his name

mentioned by Albêrûnî;¹⁶ but he saw through it so far as to remark "since there is a long interval between the era which is called the era of Vikramâditya and the killing of Śaka, we think that that Vikramâditya from whom the era has got its name is not identical with that one who killed Śaka, but only a namesake of his." And the tradition has now been quite exploded by the Bādâmi cave inscription of the Chalukya king Mangaliśa,¹⁷ which is specifically dated "when there have expired five centuries of the years of the installation of the Śaka king (or kings) in the sovereignty." It is certain, from this record, that the real historical starting-point of the era, is the commencement of the reign of some particular king, or kings, of the Śaka tribe; and, therefore, that the years were originally regnal or dynastic years. Now, such years must run on for a considerable time, before they can develop into a recognised era; and this is undoubtedly the reason why we find the earlier years of every such Hindu era quoted simply by the term *varsha* or *samvatsara*, 'a year,' without any dynastic appellation. Again, such regnal or dynastic years can only come to be quoted as expired years, when they have actually developed into an era which has become recognised, or is sought to be applied, by astronomers for astronomical processes; up to that point, the years, being wanted only for quasi-private dynastic purposes, would certainly be quoted as current years. It is impossible to believe that the first Śaka king decreed, immediately after his coronation, that a new era had been established from that event; that it was to come at once into general use; and that, for the convenience of astronomers, the first year, then running, was to be quoted as an expired year, which, in fact, it would be rather difficult to do. If it were sought to fix the exact chronological position of any public act performed in that first year, it might be referred to the expired years of an earlier era; e.g. of that of the Kaliyuga. But, for any reference to the regnal year alone, that act would be recorded as being performed "in the year one," "in the first year," or "while the first year of the reign is current;" as, for instance, "in the first year; while the *Mahārājādhirāja*, the glorious Tōramāna, is governing the earth," in line 1 f. of the Éran inscription, *Corp. Inscr. Ind.* Vol. III. No. 36, page 158. This custom would continue as long as the years were simply dynastic years; and perhaps, during the whole of that period, the years might remain purely dynastic years, each

of them having for its initial day the anniversary of the original coronation from which they started, irrespective of the initial day of the years of the astronomical era still continuing in use. When, however, astronomers came to adopt them as an astronomical era, they would establish an exact epoch by reckoning back from the dynastic year then current to the last year of the Kaliyuga that had expired when the first current dynastic year commenced; in the course of which they would simplify matters by allotting to the dynastic years the same scheme, as regards the starting-point of each year, and the arrangement of the fortnights of the months, which belonged to the Kaliyuga in their part of the country. Thus they would fix all the data necessary to enable them to use the new era for astronomical purposes. All that would remain, would be to use its expired years, in accordance with the custom and necessities of their science. The substitution of the Śaka era for the Kaliyuga, for astronomical purposes, seems to have taken place after the time of Āryabhaṭa (born A.D. 476),¹⁸ who used the Kaliyuga, and in or just before the time of Varāhamihira (died A.D. 587),¹⁹ who used the Śaka era; and probably the apparent difference of one year in the reckonings of the Śaka era will be found to have originated not far from Śaka-Samvat 500. Let us assume that this adoption of the Śaka era was made in Śaka-Samvat 500, equivalent to A.D. 577-78. The astronomers would take it, at starting, as "Śaka-Samvat 499, expired;" and, in quoting it and several subsequent years, would probably be careful to connect with each year a word distinctly meaning "expired." In course of time, however, such precision of expression would come to seem superfluous to them; and, in issuing their almanacs, they would drop the word "expired," and would write, for instance, simply "Śakê 510 Chaitra-mâsa-śuklapakṣah." It would cause no difference or inconvenience to them; because any initiate would know that this really designated the bright fortnight of the month Chaitra of Śaka-Samvat 511 current, after Śaka-Samvat 510 had expired. The people at large, however, including persons who would use the almanacs for practical purposes without being properly initiated into the application of them, would be thrown back in their reckoning by a year; and doubtless at first a good deal of inconvenience and confusion might result. But this would soon be forgotten; or might, for the sake of convenience, be inten-

¹⁶ Sachau's *Albêrûnî's India*, Translation, Vol. II. p. 6.

¹⁷ *ante*, Vol. VI p. 363 f., and Vol. X. p. 57 ff.

¹⁸ *Jour. R. As. Soc.* N. S. Vol. I. p. 495.

¹⁹ *id.* p. 407.

tionally put aside. And thus they would very quickly arrive at the understanding, by which, in Northern and Western India, Śaka-Samvat 1808 answers, popularly, as a current year, not as an expired year, to the period from the 5th April, A.D. 1886, to the 24th March, A.D. 1887.

J. F. FLEET.

CALCULATIONS OF HINDU DATES.

No. 11.

In the Nēpāl stone inscription of Mānadēva, of the Suryavaṁśi or Lichchhavi family of Mānagriha, on the lower part of a broken pillar placed to the left of the door of the temple of the god Chāngu-Nārāyaṇa, about five miles to the north-east of Khāṭmāṇḍu, the date (from Dr. Bhagwanlal Indraji's published text and lithograph; *ante*, Vol. IX p. 163, line 1f.) runs—samvat 300 80 6 Jyēsthā-māsa-śukla-pakṣhē pratipadi 1 [Rō]hiṇī-nakṣhatra-yukt[ē*] chandramasi m[u]hūrttē prāstē=Bhijiti,—“the year 300 (*and*) 80 (*and*) 6; in the bright fortnight of the month Jyēsthā, on the first *tithi* or lunar day, (*or in figures*) 1; the moon being in conjunction with the Rohini *nakṣatra*; in the excellent *muhūrta* (*named*) Abhijit.”

The Nēpāl inscriptions were first brought to notice by Dr. Bhagwanlal Indraji, in this Journal, Vol. IX. p. 163ff.; and his view of the historical results of them was given in Vol. XIII p. 411ff. My own view has been published in Vol. XIV. p. 342ff. And all that it is necessary to state here, is, that the earliest inscriptions disclose the use of two eras; *viz.* the so-called Gupta era, and the Harsha era. At the time, however, when Dr. Bhagwanlal Indraji wrote, the fact that the Gupta era was used in some of these records, was not apparent. And it only became clear on Mr. Bendall's discovery of the Gōlmāḍhītōl inscription of the *Mahārāja* Śivadēva I. of Mānagriha, which he published originally in this Journal, Vol. XIV. p. 97f., and has given again with a slight correction in the reading of the date, in his *Journey in Nēpal and Northern India*, p. 72, and Plate viii. This inscription is dated in the year 316, without any specification of the era. But the clue to the interpretation of the date is given by its mention of the *Mahāsāmānta* Amśuvarman, as the contemporary¹ of Śivadēva I. Amśuvarman's approximate date, *viz.* about A.D. 637, was very well known from Hiuen

Tsiang's mention of him.² And, as the Nēpāl series included three inscriptions of Amśuvarman himself, dated in the years 34, 39, and 44 or 45 of an unspecified era, and another, of Jishnugupta, dated in the year 48, and mentioning Amśuvarman, Dr. Bhagwanlal Indraji very properly referred these dates to the era running from the accession of Harshavardhana of Kanauj, and commencing³ in A.D. 606. This much being quite certain, it follows that the date of the year 316 for Śivadēva I., the contemporary of Amśuvarman, must of necessity be referred to a starting-point just about three hundred years before the Harsha era. And the era which exactly meets the requirements of the case is the Gupta era; for, $316 + A.D. 319-20 = A.D. 635-36$; which is in due accordance with the recorded dates that we have for Amśuvarman in the Harsha era, representing from A.D. 639 to 649 or 650.

As regards the present inscription of Mānadēva, its palaeography, as well as a general consideration of the historical results, shews that the year 386, quoted in it, belongs to the same series with the year 316, that is quoted in the Gōlmāḍhītōl inscription of Śivadēva I. And accordingly, this record gives us, for calculation, Gupta-Samvat 386, current; the month Jyēsthā (May-June); the bright fortnight; the first *tithi* or lunar day; the Rōhiṇī *nakṣatra*, or lunar mansion; and the Abhijit *muhūrta* or thirtieth part of the day and night. And the given *tithi* should belong to Gupta-Samvat $386 + 242 = Śaka-Samvat 628$ current (A.D. 705-706); and the calculation should be made with the basis of Śaka-Samvat 627 expired. This is on the analogy of the results obtained from the Ērap pillar inscription of Budhagupta,⁴ of Gupta-Samvat 165, and the Verāwal inscription of the Chaulukya king Arjunadēva,⁵ of Valabhī-Samvat 945. In each instance, the approximate year for calculation was arrived at by following Albērūnī's most specific statement regarding an even difference of two hundred and forty-one years between the Gupta-Valabhī and Śaka eras; and it was then found that correct results were obtained only by taking the resulting Śaka year as an expired year. Thus, in the Ērap record, the result was obtained with the basis of Gupta-Samvat 165 (current) $+ 241 = Śaka-Samvat 406$, expired; and, in the Verāwal record, with the basis of Valabhī-Samvat $945 + 241 =$

¹ This is also recorded in the other inscription of Śivadēva I., No. 5 of Dr. Bhagwanlal Indraji's Nēpāl series, *ante*, Vol. IX. p. 168ff. But, unfortunately for the general chronological results arrived at by him from those inscriptions—which involved the application of the Vikrama era for the interpretation of such of the Nēpāl dates as belong really to the Gupta era,—the date of Śivadēva

I is there broken away and lost.

² See Beal's *Buddh. Rec. West. World*, Vol. II. p. 81, also *ante* Vol. XIII. p. 322, and Vol. XIV. p. 345.

³ On this point, a separate note will be issued hereafter.

⁴ *ibid.*, Vol. XVI. p. 151 f.

⁵ *ibid.* p. 147ff.

Śaka-Samvat 1186, expired. And from this it is evident that, in following Albêrûnî's statement and adding two hundred and forty-one, what is really accomplished is the conversion of a given current Gupta-Valabhi year into an expired Śaka year, by which we obtain precisely the basis that is wanted for working out results by Hindu Tables, viz. the last Śaka year expired before the commencement of the current Śaka year corresponding to a given current Gupta-Valabhi year; and that the running difference between current Gupta-Valabhi and current Śaka years, is two hundred and forty-two.

Making the calculations by the *Sūrya-Siddhānta*, and applying the results to the longitude of Khâtmandu, Mr. Sh B. Dikshit finds that, with the basis of Śaka-Samvat 627 expired, the given tithi, belonging to Śaka-Samvat 628 current, ended on Tuesday, the 28th April,⁶ A.D. 705, at 57 *ghaṭīs*, 12 *palas*, after sunrise; that there was the Kṛittikā *nakshatra* up to 11 *ghaṭīs*, 3 *palas*, after sunrise, and then the Rōhiṇī *nakshatra*, which continued up to 11 *ghaṭīs*, 18 *palas*, after sunrise on the next day, Wednesday; and that, consequently, the Abhijit *muhūrta*, being the eighth in order among the *muhūrtas*, and beginning after the expiration of fourteen *ghaṭīs* after sunrise, occurred, as required by the record, while the Rōhiṇī *nakshatra* was current. He also finds that the same conditions of the *nakshatra* and the *muhūrta* did not occur, if the given tithi is treated as belonging to Śaka-Samvat 627 or 629 current. The result, therefore, answers fully to the conditions of the record; and to the circumstances under which it was to be calculated.

No 12.

The Mōrbi copper-plate grant of Jāiṅka, from Kāthiawād, published by Dr. R. G. Bhandarkar in this Journal, Vol. II. p. 257f., includes two dates. In line 16f., in connection with the making of the grant, we have (from the published lithograph)—*pañcā-śāṭīyā yutē-titē samānām śata-pañchakē* | *Gōptē dadāv=adō nṛipaḥ s-ōparā-gē-rkka-maṇḍalē* 11,—“five centuries of years, together with eighty-five (*years*), having passed by, the king gave this (*charter*) at (*the village of*) Gōpta, when the disc of the sun was eclipsed:” in which the year is expressly coupled with a word meaning “expired.” And in line 19f., in con-

nection with the writing of the charter, we have—*saṁvat 585 Phālguna su(śu) di 5*,—“the year 585; the month Phālguna; the bright fortnight; the (civil) day 5;” without any indication whether the year is an expired one, or current. The eclipse is also mentioned in line 3, in the words —*mārttaṇḍa-maṇḍal-āśrayiṇi Svavbhānō* (*read Svarbbhānau*),—“while Svarbhānu (*i.e.* Rāhu, the the personified ascending node) is resting on the disc of the sun.”

There is some difficulty in disposing finally of the whole bearing of this record; owing to the fact that the first plate was lost sight of, without being procured for examination at all; and now, even the second plate also, the published one, has been mislaid and is not forthcoming. And I have to point out that, in the second part of the verse, Dr R. G. Bhandarkar read *Gauptē*, instead of *Gōptē*; and translated “five hundred and eighty-five years of the Guptas having elapsed.” The lithograph, however, shews distinctly that the original has *Gōptē*; and it is only by the correction of *ō* into *au* that the name of the Guptas can be introduced into the passage.⁷ But, even then, the adjective *Gauptē* occupies an irregularly detached place, which any skilful composer would have avoided, from the noun, *śata-pañchakē*, which it qualifies. While, on the other hand, I have shewn, in my remarks on the nomenclature of the era,⁸ that we have no reason at all to look for the use of such an adjective as *Gauptā*, ‘belonging to the Guptas;’ and, if we maintain the original reading of *Gōptē*, we have a locative case, which we have every reason to expect in immediate connection with the verb *dadau*, ‘he gave,’ and which will then give us the name of the village at which the grant was made. And, until the original first plate of the grant is produced, to prove that Gōpta was not the name of the village,⁹ or otherwise to explain the passage, this is the reading and interpretation that I adopt.

In accordance, however, with the palæography of the grant, I see no reason for referring the date to any except the Gupta-Valabhi era, irrespective of the question whether the era is mentioned by name, or not. This record, therefore, gives us, for calculation, an eclipse of the sun, which took place on some unspecified date in Gupta-Samvat 586 current, as the original

⁶ Śaka-Samvat 628 current commenced rather early on, approximately, Sunday, the 1st March, A.D. 705. And hence the reason why the month Jyēsthā, which ordinarily answers to May-June, commenced on the 28th April, and of course ended before the end of May.

⁷ The mistake of *ō* for *au* does occur in the word *svarbbhānau* for *svarbhānau*, in line 3 of the grant. But in line 9, in the word *paurva*, the *au* is formed quite correctly and completely.

⁸ See, when issued shortly, *Corpus Inscriptionum Indicarum*, Vol. III. Introduction, p. 19 ff.

⁹ We might easily find its present representative in the modern name of Gōp, which occurs in the case of a village, in Kāthiawād, about seventy-five miles south-west of Mōrbi; twenty-five miles south of Nawānagar or Jāmnagar; and fifty miles east of Dhinaki, where there was found the copper-plate grant of Jāikadōva, which purports to be dated in Vikrama-Samvat 794.

text specifies that the year 585 had expired. And, on the analogy noted under No. 11 above, the eclipse should be found in Gupta-Samvat 586 + 242 = Śaka-Samvat 828 current, somewhere between¹⁰ the 10th March, A.D. 905, and the 27th February, A.D. 906. Also, it should presumably, be visible at the place at which the grant was made on the occasion of it. And, though there is nothing, in the existing remnant of the record, to indicate with certainty the exact locality to which it belongs, still there is nothing against the supposition that it really belongs to Mōrbi itself, or to that neighbourhood. We have, therefore, to look for a solar eclipse, occurring in Śaka-Samvat 828 current, and visible at Mōrbi, or near that town, in the north of Kāthiāwād.

Gen. Sir A. Cunningham's Table¹¹ mentions no solar eclipse as having occurred during the period defined above. But, by calculations from Prof. K. L. Chhatre's Tables, Mr. Sh. B. Dikshit finds¹² that there was an eclipse of the sun, on Tuesday, the 7th May, A.D. 905, corresponding to the new-moon *tithi* of the *Pūrṇimānta* northern Jyēsthā of Śaka-Samvat 828 current, which fully answers the required conditions.¹³ It was visible at Mōrbi; over almost the whole of Southern India; and in Ceylon. The magnitude, at Mōrbi, was one ninth of the sun's disc; and, in the southern parts of India, greater than this. And the middle of the eclipse, at Mōrbi, was at 12.9 midday of the Mōrbi mean civil time. This eclipse, accordingly, was very distinctly visible at Mōrbi; even if it was not known beforehand from calculations. And this result answers fully to the conditions of the record; and to the circumstances under which it was to be calculated.

In respect of the given civil day for the writing of the charter, viz. the fifth civil day in the bright fortnight of the month Phālguna (February-March), as the name of the weekday is not given, the only test that we can apply,—if, indeed, it does really amount to a test,—is the pre-

sumption that the running number of the lunar *tithi* is the same as that of the civil day, i.e. that the fifth lunar *tithi* ended on the fifth civil day of the fortnight. If the year 586, connected with this civil day, is to be taken as expired, as in connection with the eclipse, this should be the case in Śaka-Samvat 828 current. And, by calculations for that year from Prof. K. L. Chhatre's Tables, Mr. Sh. B. Dikshit finds that the preceding new-moon *tithi*, which was that of the *Pūrṇimānta* northern Phālguna, or the *Amānta* southern Māgha, ended on Monday, the 27th January, A.D. 906; and the fifth *tithi* of the bright fortnight of Phālguna ended on Saturday, the 1st February, which was the fifth successive civil day. If this date is accepted, then the charter was written nine months after the making of the grant.¹⁴ On the other hand, if the year 585 is here to be taken as current, there should be the same agreement of the lunar *tithi* and the solar day in Śaka-Samvat 827 current. And, for this year, Mr. Sh. B. Dikshit finds that the preceding new-moon *tithi* ended on Thursday, the 7th February, A.D. 925; and that the fifth *tithi* of the bright fortnight of Phālguna ended on Tuesday, the 12th February, which was again the fifth successive civil day. If this date is accepted, then the charter was prepared two months before the actual making of the grant.

It may perhaps be argued, hereafter, in opposition to my results for the exact epoch of the era, that all the Gupta-Valahhī dates are recorded in expired years, whether the fact is distinctly stated or not; and, consequently, that it is as an expired year, not current, that the year 165 of the Ēran pillar inscription is equivalent to A.D. 484-85 current, and that the year 585 expired, of the present record, is equivalent to A.D. 904-905 current. In that case, the solar eclipse would have to be found in Gupta-Samvat 585 + 242 = Śaka-Samvat 827 current, somewhere between¹⁵ the 21st March, A.D. 904, and the 9th March, A.D. 905. During this period, there were two eclipses of the sun;¹⁶ on Saturday, the 16th

¹⁰ Of course, as it could only take place at a new-moon conjunction, it did not occur on the given civil day for the writing of the charter.—The limits within which we must look for it, are the first and the last days of Śaka-Samvat 828 current, as given in *Indian Eras*, p. 167.

¹¹ See *Indian Eras*, p. 213.

¹² For his calculations, which are based on the apparent longitudes of the sun and the moon, he has taken the latitude and longitude of Mōrbi, which I was not then able to supply to him, as 22° 45' N. and 70° 51' E. I now find that, in Thornton's Gazetteer of India, the figures are 22° 49' N. and 70° 53' E. Mr. Sh. B. Dikshit states, however, that the difference will not palpably affect his results.

¹³ So also Prof. K. L. Chhatre himself obtained the same eclipse; see Dr. R. G. Bhandarkar's *Early History of the Dekhan*, p. 99, where, with a slight difference of

phraseology, the eclipse is given as occurring "on the 30th of Vaisākha, Śaka 827," the reference being to the *Amānta* southern month and the expired Śaka year.

¹⁴ There is nothing in the record itself, to indicate whether the writing of the charter preceded, or followed, the making of the grant. The Rājū grant of Tivara-dēva, *Corp. Inscr. Ind.* No. 81, page 291, furnishes another similar instance. In that instance, the grant was made on the eleventh *tithi* of Jyēsthā (May-June), while the charter was written, or assigned, on the eighth civil day of Kārttika (October-November); and there is nothing to show specifically whether it was the following, or the preceding, Kārttika. That charter may have been written, or assigned, either five months after, or seven months before, the making of the grant recorded in it.

¹⁵ See *Indian Eras*, p. 167.

¹⁶ *Id.* p. 213.

June, A.D. 904, corresponding to the new-moon *tithi* of the *Pūrṇimānta* northern Āshāḍha of Śaka-Samvat 827 current; and on Saturday, the 10th November, A.D. 904, corresponding to the new-moon *tithi* of the *Pūrṇimānta* northern Mārgaśīrsha of the same Śaka year. In respect of the first of them, Mr. Sh. B. Dikshit finds that it was not visible anywhere in India; but only in the more northern parts of the earth. This, therefore, cannot be the eclipse intended. In respect of the second of them, he finds that it was visible at Mōrbī; over more than half the northern part of Kāthiāwād; and, to the south, along the coast, as far as Surat, one hundred and seventy miles south-east of Mōrbī, and in the interior, a little further still. And, at Mōrbī, the middle of the eclipse was at 11.54 A.M. of the Mōrbī mean civil time. At Ahmedābād, one hundred and twenty miles east by north from Mōrbī, one twelfth of the sun's disc was eclipsed; and, in the more northern parts of India, a considerably greater surface. But, at Mōrbī itself, the magnitude of the eclipse was very small; extending there to only one twenty-fifth part of the disc.¹⁷ This eclipse, therefore, setting aside all other considerations, is not in any way as satisfactory as that of the 7th May, A.D. 905.

J. F. FLEET.

A NOTE ON THE LOKAKĀLA RECKONING.

In the course of his remarks on the *Lōkakāla* or popular reckoning by cycles of a hundred years, in mentioning the "roundabout way" in which the Hindus computed the date (in January, A.D. 1026) of the destruction of Sōmnāthpātan by Mahmūd of Ghazni, which event took place "in the year of the Hijra 416, or 947 Sakakāla," Albérūnī tells us that they first wrote down 242, then 606 under it, and then, again, 99; with the result, by addition of the figures, of Śaka-Samvat 947, which, as an expired year, brings us to the period A.D. 1025-26 current, inclusive of the month of January, A.D. 1026.

This passage follows very closely after his account of the Gupta-Valabhi and other eras. And the first figures of this process, which is manifestly connected directly with the Gupta-Valabhi reckoning, would seem, at first sight, to indicate that, in this calculation, the epoch of the era was treated as being when

Śaka-Samvat 242 had expired, which brings us to the period A.D. 320-21.

Albérūnī, in fact, expresses himself as being inclined to think that the number 242 indicates the years which preceded the time when the Hindus commenced to use the cycle of a hundred years, and that they adopted this cycle together with the Gupta era; also that the number 606 represents the completed cycles, viz. six, "each of which they must reckon as 101 years;" and that the number 99 gives the expired years of the current cycle. He goes on to say that the rule, as found by him in the writings of Durlabha of Multān, was, to write down 848, and add the *Lōkakāla*; the sum of which would give the Śaka year. But, in proceeding to apply this rule to Śaka-Samvat 953 (expired), as corresponding to the year 400 of the era of Yazdajird,¹ which he had already used as a "gauge-year," he points out that, subtracting 848, there remained 105 for the *Lōkakāla*, while the destruction of Sōmnāthpātan would fall in the 98th year of the cycle.

There are subsidiary difficulties here, which cannot at present be fully cleared up. One of them is, the reference of the destruction of Sōmnāthpātan to both the ninety-eighth and the ninety-ninth years of a *Lōkakāla* cycle; with the addition, moreover, that the ninety-eighth year is indicated as current, and the ninety-ninth is inferred to be expired. Another is, that, according to the only *Lōkakāla* reckoning the nature of which has been fully explained,² viz. that used in Kāśmīr,—which, Albérūnī tells us, had been adopted by the people of Multān a few years before his own time,—the event in question would fall in the first current year of a cycle.

Thus, Kalhana, in the *Rājataranginī*, i. 52 (Calcutta edition, p. 3), makes a very explicit statement regarding the equation between the Śaka era and the *Lōkakāla* of Kāśmīr. His words are—

Laukikē=bdē chatur-vinśē
Śaka-kālasya sāmpratam;
saptaty=ātyadhikam yātam
sahasram parivatsarāḥ ||

"At this present moment, in the twenty-fourth *laukika* (or popular) year, there have gone by one thousand years, increased by seventy, of the Śaka era." In this passage, he quotes the Śaka year as expired, in accordance with the practice of astronomers; but the *Lōkakāla* year as current,

¹⁷ Mr. Sh. B. Dikshit has not made actual calculations for the village of Gūp (see note 9 above); but is able to state that both the eclipses of the 7th May, A.D. 905, and of the 10th November, A.D. 904, were visible there: the circumstances of the former eclipse, in respect of visibility, being more favourable, and those of the latter being less so at Gōp than at Mōrbī.

¹ This era dates from the accession of Yazdajird III., a Sassanian king of Persia, in A.D. 632, (see *Prinsep's Essays*, Vol. II. Useful Tables, p. 302 and note.) The "gauge-year," 400, selected by Albérūnī for the comparison of dates, is equivalent to A.D. 1031-32, and is one year ahead of that in which he was writing.

² By Gen. Sir A. Cunningham, in *Indian Eras*, p. 6 ff.

as would naturally be the case in using a popular reckoning of that kind. He was writing, therefore, in Lōkakāla 24 current, and when Śaka-Saṃvat 1070 had expired; which is equivalent to A.D. 1148-49 current. And this gives Lōkakāla 1 current of the same cycle, as corresponding to Śaka-Saṃvat 1047 expired; which is equivalent to A.D. 1025-26 current.

Now, that the scheme of each year of the **Kāsmirī Lōkakāla** cycle was identical with the scheme of the Śaka years of Northern India, commencing with Chaitra śukla 1, is shewn by Albêrûni's statements, and by the notes put together by Gen. Sir A. Cunningham in his exposition of this reckoning. And it follows that the first year, current, of each Kāsmirī Lōkakāla cycle coincides exactly with the forty-seventh year expired, and the forty-eighth current, of each century of the Śaka era, and with part of the twenty-fifth and part of the twenty-sixth years, current, of each century of the Christian era. The month of January, A.D. 1026, therefore, fell in Lōkakāla 1 current, of Kāsmir, which coincided with Śaka-Saṃvat 947 expired, and extended³ from the 3rd March, A.D. 1025, to the 21st March A.D. 1026. And it is difficult to see how, in the application of a Lōkakāla reckoning introduced from Kāsmir, an event occurring in that month can be correctly referred even to Lōkakāla 99 expired; and, much more so, to Lōkakāla 98 current. To suit the former case, we require a cycle commencing one year later than the Kāsmirī cycle; and to suit the latter case, a cycle commencing three years later than the same. And, that there were varying starting-points of this kind, as well as a want of uniformity in respect of the scheme of the years, is indicated by Albêrûni's remark that the totally different accounts of the Lōkakāla reckonings, given to him, rendered him unable to make out the truth about it.

One point, however, seems clear. As to the number 606, given by Albêrûni in his first illustration, it is impossible that a centenary cycle can consist of a hundred and one years. And Albêrûni himself had previously said distinctly, 'if a *centennium* is finished, they drop it, and simply begin to date by a new one.' It is plain, in fact, that the odd six years do not belong to the cycles of the Lōkakāla. To that reckoning, only the six even centuries belong. If we add the odd six years to Śaka-Saṃvat 241 expired, —as representing the epoch of the Gupta-Valabhi era, which really was A.D. 319-20 current, and might be quoted either as Śaka-Saṃvat 241 expired or 242 current, —we obtain Śaka-Saṃvat 247 expired, or 248 current, equivalent to A.D.

325-26 current; and this, as we have just seen, would coincide with the first current year of a Lōkakāla cycle, as reckoned in Kāsmir. But it is one year too early for the first current year of any cycle of a reckoning, in a subsequent cycle of which the event in question belonged to the ninety-ninth year expired and the hundredth year current.

Now, I suppose that we must assume that Albêrûni has quoted Durlabha correctly. And, if so, then the first current year of each cycle in the Multān reckoning really was one year later than in the Kāsmirī reckoning; and coincided with the forty-eighth year expired, and the forty-ninth current, of each century of the Śaka era, and with part of the twenty-sixth and part of the twenty-seventh years, current, of each century of the Christian era. And, if the introduction of the reckoning, at Multān, could be carried back so far, it commenced with Śaka-Saṃvat 248 expired, and 249 current. This year might have been obtained by adding seven to Śaka-Saṃvat 241 expired. But the real use of Śaka-Saṃvat 241 expired is only for obtaining the basis with which Gupta-Valabhi dates have to be calculated; and it only brings us to the beginning of the Gupta epoch. The difference between Gupta-Valabhi and Śaka years, both treated as current for purposes of comparison, is 242. And Śaka-Saṃvat 242 expired brings us to the beginning of the first current Gupta year. This is the starting-point that was really wanted for a process of the kind shewn to Albêrûni. And this is why that year was selected as the apparent basis of the computation; the true basis being Śaka-Saṃvat 848 expired.

It is evident, therefore, that the process illustrated by the figures given to Albêrûni does involve a method of adapting the Lōkakāla reckoning to the Gupta era; or, more properly, of converting Lōkakāla dates into Śaka dates through the Gupta reckoning. So far, however, from the figures tending to support any inference that the Lōkakāla reckoning was introduced by, or in the time of, the Early Guptas, the fact that Durlabha of Multān would deduct 848, with a remainder, in the particular instance, of 105, or one complete Lōkakāla cycle and five years over, seems to indicate very clearly that the use of this reckoning in that part of the country commenced with Śaka-Saṃvat 848 expired, equivalent to A.D. 926-27 current. Had it been otherwise, Durlabha's rule would surely have been worded in such a way that, in the particular instance, 948 must be deducted, with a remainder of only 5 years over.

J. F. FLEET.

³ See *Indian Eras*, p. 171.

It is true that the same scholar, in order to obtain the proper week-day, in his *Indian Eras*, page 61, has come to the conclusion that he may perhaps have misread 793 for 792; but (considering the fact that 792 *expired* would still all be 793 *current*) I believe that any one obliged to choose would certainly accept Sir A. Cunningham's first statement, and reject his subsequent conjecture. And assuming the plate to have really been dated — Sāhvat 793 Prāgma ba di. 9 Sômê, *i. e.* 'the year 793, the 9th of the dark half of the month Prāgma, on a **Monday**,' the corresponding date is **Monday, January 18, 1042**. On that day, at sunrise, the 9th *tithi* of the dark half was current, and it ended 17h 9m after mean sunrise. According to von Oppolzer's *Canon der Epochen desse*, there was a lunar eclipse, and consequently, a full-moon, on January 9, 1042, 4h 14m Greenwich time, or at Lañka about 10h 30m.

2.—A Ratnapur inscription of Jājalla-dēva I. of which a good rubbing has been supplied to me by Dr. Burgess, is dated — Sāhvat 806. Marga su. di. 9 Ravā, *i. e.* 'the year 806, the 9th of the bright half of the month Margaśiras, on a **Sunday**.' The corresponding date is **Sunday, November 8, 1114**. On that day, at sunrise, the 9th *tithi* of the bright half was current, and it ended 19h 54m after mean sunrise. [Calculated by Paul Lehmann's *Tables of the variation of the phases of the moon*, there was a new-moon, at Lañka, on October 30, 1114, 10h 20m.]

3.—The Rājīm inscription of Jagapāla, of which a good rubbing has been supplied to me by Mr. Fleet, is dated — Kulachuri-sāhvat 890. Magha mesi Śukla-pakṣe nabhāshya-yar. Badi mahā, *i. e.* 'in the Kulachuri year 890, on the eighth lunar-day (called *nabhāshya*) of the bright half of the month Magha, on a **Wednesday**.' The corresponding date is **Wednesday, January 3, 1145**. On that day, at sunrise, the 8th *tithi* of the bright half was current, and it ended 19h 49m after mean sunrise. According to von Oppolzer's *Canon der Epochen desse*, there was a solar eclipse, and consequently, a new-moon, on December 26, 1144, 3h 29m Greenwich time, or at Lañka, about 10h 30m.

4.—A Sōrinārayan inscription, according to Sir R. Jenkins, *Asiatic Researches*, Vol.

XV. page 505, is dated 'Sāhvat 898, Ashwin Shudh Saptami': according to *Archæol. Survey of India*, Vol. IX. page 86, 'in the Kulachuri Sāhvat in the year 898, Aswin sudi some'; and page 111, '898 Aswina sudi 7, Monday.' A photozincograph in *Archæol. Survey of India*, Vol. XVII. Plate xxii. gives only part of the date, thus: 'Kalachurīh sāhmvatsarē 898:' and Sir A. Cunningham, in his *Indian Eras*, page 61, states that 'a fresh examination has shown' the date to be 'Āśvina su. di. 2' (and not 'Āśvina su. di. 7'). I therefore take the date to be 'Kalachuri-sāhmvatsarē 898 Āśvina su. di. 2 Sômê,' *i. e.* 'in the Kulachuri year 898, the 2nd of the bright half of the month Āśvina, on a **Monday**.' The corresponding date is **Monday, September 9, 1146**. On that day, at sunrise, the 2nd *tithi* of the bright half was current, and it ended 21h 54m after mean sunrise. [Calculated by P. Lehmann's *Tables*, there was a new-moon, at Lañkā, about 2 hours before sunrise of September 8, *i. e.* on September 7, 1146.]

5.—A Têwār inscription, according to Sir A. Cunningham, *Archæol. Survey of India*, Vol. IX. page 111, and *Indian Eras*, page 61, is dated — 902, Āśbādha su. di. 1, **Sunday**, a statement about which I am somewhat doubtful, and which, at any rate, I am unable to verify. Supposing it to be correct, the corresponding date would be **Sunday, June 17, 1151**. On that day, at sunrise, the first *tithi* of the bright half was current, and it ended 2h after mean sunrise. [Calculated by P. Lehmann's *Tables*, there was a new-moon, at Lañkā, shortly before noon on June 16, 1151.]

6.—The Bhēra-Ghāt inscription of Alha-nadēvi, which has been edited by Dr. F. L. Hall, in the *Journal American Or. Soc.*, Vol. VI. page 499, and of which we have a photozincograph in *Archæol. Survey of Western India*, No. X. page 107, according to the published version, is dated — Sāhvat 907, Marga su. di. 11 Ravā, *i. e.* 'the year 907, the 11th of the bright half of the month Margaśiras, on a **Sunday**.' This reading of the date I have hitherto taken to be correct. At present, however, I strongly incline to accept the suggestion of Mr. Fleet, based upon a more careful examination of the lithograph than I had given to it, that the number of the day is 10, and either that the engraver first formed 11, and

corrected it into 19, or that, in forming the 0, his tool slipped, and thus gave to the C a partial appearance of 1. And taking the day to be the 10th, I find that the corresponding date is **Sunday, November 6, 1155**. On that day, at sunrise, the 10th *tithi* of the bright half was current, and it ended 2h 8m after mean sunrise. Should the number of the day on an examination of the stone itself, which is now in America, after all, prove to be 11, the year 907 would have to be regarded as an expired year, and the corresponding date would then be **Sunday, November 25, 1156**. On that day, at sunrise, the 11th *tithi* of the bright half was current, and it ended 1h 54m after mean sunrise. [According to von Oppolzer's *Canon der Finsternisse* there was a solar eclipse, and consequently, a new-moon, on November 26 (*i.e.* 29 days after November 6), 1155, 11h 22m Greenwich time, or at Lañkā, about 5 p. m. And there was another solar eclipse, and consequently, a new-moon, on November 14, 1156, 22h 32m Greenwich time, or, at Lañkā, 3h 35m A. M., of November 15, *i.e.* on November 14].

7.—**The Lāl-Pahār rock inscription of Narasimhadēva**, according to the rough photozincograph published in the *Archæol. Survey of India*, Vol. IX. Plate ii, is dated — Śaivāt 999 Śrāvaṇa su. di. 5 Budhē, *i.e.* 'the year 909, the 5th of the bright half of the month Śrāvaṇa, on a **Wednesday**.' The corresponding date is **Wednesday, July 2, 1158**. On that day, at sunrise, the 5th *tithi* of the bright half was current, and it ended 16h 26m after mean sunrise. In A.D. 1158 the solar month Śrāvaṇa lasted from about sunset of June 26 to about sunrise of July 28, and it contained two new-moons, one on June 27, 19h 8m after sunrise, and the other on July 27, 4h 53m after sunrise. The year therefore contained two lunar months Śrāvaṇa, and July 2 was śu. di. 5 of the *adhika* Śrāvaṇa; śu. di. 5 of the *vya* Śrāvaṇa would have been Friday, August 1. Calculated by P. Lehmann's *Tables*, there was a new-moon, at Lañkā, shortly after midnight on June 28, *i.e.* on June 27, 1158.

8.—According to Sir A. Cunningham, *Archæol. Survey of India*, Vol. IX, page 111, and *Indian Eras*, page 61, a **Bhêra-Ghât inscription** is dated '928 Magha ba. di. 10, **Monday**. I confess that I have no means whatever of verifying the statement, but sup-

posing it to be correct, the corresponding date would be **Monday, December 27, 1176**. On that day, at sunrise, the 10th *tithi* of the dark half was current, and it ended 13h 40m after mean sunrise. [Calculated by P. Lehmann's *Tables*, there was a full-moon, at Bhêra-Ghât, about 2 A.M. of December 18, *i.e.* on December 17, 1176].

9.—**The Têwâr inscription of Jayasimhadēva**, which has been edited by Dr. F. E. Hall, in the *Journal American Or. Soc.*, Vol. VI, page 512, and of which we have a rough photozincograph in *Archæol. Survey of Western India*, No. X, page 110, is dated — Śaivāt 928 Śrāvaṇa su. di. 6 Ravau Hastē, *i.e.* 'the year 928, the 6th of the bright half of the month Śrāvaṇa, on a **Sunday, the moon being in the asterism Hasta**.' The corresponding date is **Sunday, July 3, 1177**. On that day, at sunrise, the 6th *tithi* of the bright half was current, and it ended 7h 39m after mean sunrise. In A.D. 1177 the solar month Śrāvaṇa lasted from about 2h before sunrise of June 27 to about 3h before sunset of July 28, and it contained two new-moons, one on June 27, 18h 34m after sunrise, and the other on July 27, 1h 51m after sunrise. This year too, therefore, contained two lunar months Śrāvaṇa, and July 3 was śu. di. 6 of the *adhika* Śrāvaṇa, and **on that day the moon was in the asterism Hasta**. Śu. di. 6 of the *nija* Śrāvaṇa would have been Monday, August 1, when the moon was (not in Hasta, but) in Jyêshthâ. [Calculated by P. Lehmann's *Tables*, there was a new-moon, at Lañkā, about 1 A.M. on June 28, *i.e.* on June 27, 1177].

10.—**A Sahaspur inscription**, according to the photozincograph published in *Archæological Survey of India*, Vol. XVII, Plate xxii, is dated — Śaivāt 934 Kârttika su. di. 15 Budhē, *i.e.* 'the year 934, the 15th of the bright half of the month Kârttika, on a **Wednesday**.' The corresponding date is **Wednesday, October 13, 1182**. On that day, at sunrise, the 15th *tithi* of the bright half was current, and it ended 13h 57m after mean sunrise. [Calculated by P. Lehmann's *Tables*, there was a full-moon, at Lañkā, on October 13, 1182, in the evening].

To the dates given under 5 and 8, I at present attach, for the reasons stated, very little value. Of the other dates, two have been

taken from good impressions, four from photo-zincographs, and for the remaining two we have the somewhat emphatic statements of Sir A. Cunningham, the correctness of which I see no reason to doubt. And, if my calculations be at all correct, it is a fact, that of all the years from A.D. 201 to 280, only the year 248-49, taken as the epoch of the Chêdi era, yields correct week-days for every one of these eight dates, and at the same time places the moon in the asterism mentioned in one of these dates. Whether there are *historical* reasons for which the epoch of the Chêdi era should be placed *before* A.D. 201 or *after* A.D. 280, others will be more competent to say than I am; but I may mention one or two facts, which render either alternative extremely improbable, I may say, impossible.

From an Alha-Ghât inscription, of which we have a photolithograph in *Archæol. Survey of India*, Vol. XXI. Plate xxviii. we learn that Narasimhadêva was reigning in [Vikrama-] Samvat 1216 = A.D. 1159.⁶ The same Narasimhadêva (together with his younger brother Jayasimhadêva) is mentioned, as reigning prince, in Alhanadêvi's inscription of [Chêdi-] Samvat 907. Supposing, then, the Chêdi era to have commenced, *e.g.*, in or before A.D. 200, Narasimhadêva would have reigned in or before A.D. 907 + 200 = 1107, *i.e.* already at least 52 years before A.D. 1159, the year in which we know him to have reigned.

Again, from the Rêwah copperplate inscription of the mahârâjapala Salakhanavarmadêva which is mentioned in *Archæol. Survey of India*, Vol. XXI. page 146, and of which I owe an impression to Mr. Fleet, we know that Vijayadêva was reigning in [Vikrama-] Samvat 1253 A.D. 1195.⁷ And from a Têwâr inscription we learn that his father, Jayasimhadêva, was reigning in [Chêdi-] Samvat 928. If, then, the Chêdi era had commenced as late as, *e.g.*, A.D. 270, not to mention A.D. 280, Jayasimhadêva would have reigned in or after A.D. 928 + 270 = 1198, *i.e.* at least three years *after* his own son, which clearly is impossible. On the other

hand, starting from A.D. 248-49, we obtain for the three princes mentioned the following dates, which may speak for themselves —
Narasimhadêva,—

$$\text{Chêdi-s.}^8 \ 907 + 248 = \text{A.D. 1155.}$$

$$\text{Chêdi-s.}^9 \ 909 + 248 = \text{A.D. 1157.}$$

$$\text{Vikrama-s.}^{10} \ 1216 - 57 = \text{A.D. 1159.}$$

His younger brother Jayasimhadêva,—

$$\text{Chêdi-s.}^{11} \ 926 + 248 = \text{A.D. 1174.}$$

$$\text{Chêdi-s.}^{12} \ 928 + 248 = \text{A.D. 1176.}$$

His son Vijayasimhadêva,—

$$\text{Chêdi-s.}^{13} \ 932 + 248 = \text{A.D. 1180.}$$

$$\text{Vikrama-s.}^{14} \ 1253 - 58 = \text{A.D. 1195.}$$

Narasimhadêva's father and predecessor was Gayakarnadêva. That prince issued the Jabalpur copper-plate grant, of which one plate, containing the date, unfortunately has now been lost, but regarding the contents of which we know from a transcript¹⁵ that Gayakarna made a grant of a certain village, "having bathed in the Narmadâ at the time of the Makara-samkrânti, on Monday, the 10th of the waning moon of Mâgha in the year * * *." Supposing Narasimhadêva to have reigned in 907 + 248, *i.e.* as I have shown above, A.D. 1155, the Makara-samkrânti must have taken place on a Monday, the 10th of the waning moon of Mâgha, in some year before, but at such a distance from A.D. 1155, as would suit the relation to each other of father and son. And it is again a fact that the year, which fulfils these conditions, is A.D. 1122. For in that year, the tenth of the waning moon of Mâgha, by the northern reckoning, fell on December 25, which was a Monday, and in the same year the Makara-samkrânti took place shortly before sunrise of, or, for practical purposes, on Monday, December 25, as required. I may add that on that day the 10th *tithi* of the dark half was current, and that it ended 9h 43m after mean sunrise.

In *Archæol. Survey of India*, Vol. XXI. Plate xxvii. Sir A. Cunningham has given a photolithograph of an inscription from Bêsâni, the date of which he reads "Samvat 958 prathamâ Ashâdha su. di. 3." and from the

⁶ Samvat 1216 Bhadra su. di. pratipadâ Rayan Sunday, August 16, 1159.

⁷ The exact date I shall give, when editing the inscription. ⁸ Alhanadêvi's inscription.

⁹ Lâl-Pahâr rock inscription.

¹⁰ Alha-Ghât inscription.

¹¹ Rêwah copperplate inscription, *Archæol. Survey of*

India Vol. XXI. p. 145.

¹² Tower inscription.

¹³ Kundli copperplate inscription, *Journ. As. Soc. of Bengal* Vol. XXXI. p. 116.

¹⁴ Rêwah copperplate inscription, *Archæol. Survey of India* Vol. XXI. p. 146.

¹⁵ *Archæol. Survey of India*, Vol. IX. p. 8.

characters of which he concludes that the era used must be that of Kalachuri or Chêdi. The meaning of the date is 'the year 958, the third of the bright half of the first month Âshâdha,' which shows that in the year mentioned Âshâdha was an intercalary month. If I am right in assuming that the Chêdi era began about July-August A.D. 249, the month Âshâdha must have been intercalary about June, A.D. 1207. And Âshâdha was intercalary in A.D. 1207. For in that year the solar month Âshâdha lasted from May 26, about 1h 40m after sunset, to June 27, about 4h after sunrise, and during that time there were two new-moons, one on May 28, 9h 30m after mean sunrise, and the other on June 26, 23h 41m after mean sunrise.

The Rêwah copper-plate inscription of the *mahârâjaka* Kirtivarman, which is mentioned in *Archæol. Survey of India*, Vol. XXI. page 145, and of which I owe an impression to Mr. Fleet, is dated — samvat 926 Bhâdrapada-māsê śukla-pakshê caturthyâm tithau Gurudinê, i.e. 'the year 926, in the month Bhâdrapada, in the bright half, on the fourth tithi, on Gurudina or Thursday.' Judging from the style of the letters, and from the fact that the paramount sovereign of the grantor was the lord of Trikaliṅga, Jayasimhadêva, whom from a Têwâr inscription mentioned above we know to have reigned in Chêdi-Samvat 928, this date is clearly to be referred to the Chêdi era. With the epoch A.D. 248-49, and a year commencing with any of the six months from Chaitra to Bhâdrapada, the corresponding date must belong to A.D. 1174, or, if by chance the year 926 should be the year expired, to A.D. 1175. In 1174 the fourth tithi of the bright half of Bhâdrapada ended 17h 9m after

mean sunrise of August 3, which was a Saturday, and therefore evidently not the day intended. And in 1175 the same fourth tithi commenced 8h 9m after mean sunrise of Thursday, August 21, and ended 10h 4m after mean sunrise of Friday, August 22. Looking to the wording of the date, I see no reason why the grant should not have been made during that portion of Thursday, August 21, 1175, when the fourth tithi was current: on the contrary, the tithi in question being the *Ganêśa*, *chaturthi*, the religious ceremonies and the gifts to Brâhmanas connected with them, certainly ought, so far as I know, since the tithi commenced about 8 hours after sunrise, to have been performed on the Thursday, although civilly that day was the third of the bright half of Bhâdrapada.¹⁶ I therefore regard the result as satisfactory;¹⁷ and will only add, that the same result for the commencement of the tithi, Thursday, August 21, 1175, would be obtained, with the epoch A.D. 248-49, for the Chêdi year 926 current, if there were any authority for making the year begin with the month Âśvina. (See note 5 above.)

Three other inscriptions, the dates of which have been referred to the Chêdi era (whether rightly or wrongly, I must leave it to others to decide), are mentioned *ante*, Vol. XIII. page 77.

Of these, the Ilâô grant, which has been edited by Mr. Fleet, *ib.* page 115, is dated — Śaka-nripa-kâl-utita-samvatsara-śata-chatusṭayê sap-tadaś-âdhikê Jyêsth-âmâvâsyâ-ûryagrâhê, i.e. according to Mr. Fleet's translation, 'in (the year) four hundred, increased by seventeen, of the centuries of years that have elapsed from the time of the Saka king, at (the time of) an eclipse of the sun on the new-moon day of

¹⁶ An exactly similar date, recorded in the Nêwâr era, about the epoch of which, as I shall have occasion to show in a future paper, there can be no doubt whatever, we have *ante*, Vol. IX. pp. 185-187. The wording of it is — *Sarvât 757 Phâlguna-māsê śukla-pakshê dîvan tithau Ârêtrâ pûrvanârta-saurâshṭrî: Âyushmat-âp. Bâhispiti-âstê*, i.e. 'the year 757, in the month Phâlguna in the bright half, on the tenth tithi, (the moon being) first in the *pûrvanârta* Ârêtrâ and afterwards in Pûrnâvasu, in the *nâga* Âyushmat, on a Thursday'; and the corresponding date, undoubtedly is Thursday, March-February 23, A.D. 1637. On that day, at sunrise, the moon *was* in Ârêtrâ, and later in the day it *was* in Pûrnâvasu; and the current *of* *moons* Âyushmat. Civilly, Thursday, February 23, was the 9th of the bright half of Phâlguna; but the day is nevertheless, the right day and the wording of the date is literally correct, because the ninth tithi ended, and the tenth tithi began, 5h 49m after mean sunrise. The religious cere-

monies, to which the date refers, evidently were performed in that part of Thursday, Phâlguna Śa. di. 9, during which the tenth *tithi* was current.

¹⁷ The rule on this point, given to me by Mr. Sh. B. Dikshit, is, that the worship of Ganêśa on the *Ganêśa-chaturthi*, and any ceremony connected with it, must be performed on that civil day on which there actually is the *chaturthi* or fourth tithi at noon. In the present instance, this was the case on the Thursday. And, if the grant was made specially to celebrate the *Ganêśa-chaturthi*, it must have been made on the Thursday; and so the *chaturthi* as a current tithi, would for this purpose be properly coupled with the Thursday, though, in the almanac, it would be coupled in the ordinary manner, as an expired tithi, with the Friday. There ought to be an indication of the circumstances, in the record. And this may be found in the opening verse, which is an invocation of Ganêśa under the names of Heramba and Gaganâyaka. — J. F. F.

(the month) Jyêshtha.' Assuming, for reasons which it is unnecessary to mention here, the date to have been recorded in the Chêdi era, and taking that era to commence, as we have done hitherto, about July-August A.D. 249, the year corresponding to the Chêdi year 417 *expired*, would be **A.D. 667**. In that year, the new-moon day of the month Jyâishtha fell on **April 29**, and on that day **there was no solar eclipse; nor was there one in April or May of the preceding year A.D. 666.**¹⁵ On the other hand, taking the date to be recorded, as stated in the grant itself, in the **Saka era**, the corresponding date is **May 10, A.D. 495** and on that day **there was a solar eclipse** 19h 39m Greenwich time.

The **Nausâri grant**, which has been edited by the late Dr. Bhagvanlal Indraji, *ib.* page 70, is dated — 456 (expressed both in numerical symbols and in words), Mâgha-suddha-pañchadaśyâm chandr-ôparâgê, *i.e.* 'on the 15th lunar day of the bright half of the month Mâgha, on the occasion of an eclipse of the moon,' on a day of the week which, owing to the damaged state of the plate cannot now be given with any certainty. Assuming the date to have been recorded in the Chêdi era, and taking that era to commence about July-August A.D. 249, the corresponding date must be either **Wednesday, January 14, 795**, or **Tuesday, February 2, 706**, according as the figure 456 denotes the current year or the number of years expired. According to von Oppolzer's *Canon der Finsternisse* there was no lunar eclipse on January 14, 795, but **there was one on February 2, 706**, 16h 37m Greenwich time or at Laïkâ, 9h 49m P.M.

For the date of the **Kâvi grant**, which has been edited by Dr. Bühler, *ante*, Vol. V. page 109, and of which I owe a photograph to Dr. Bühler and an impression to Mr. Fleet, we have two data, one in lines 15 and 16, and the other in lines 24 and 25, of which the latter, unfortunately, owing to the state of the plate, is not absolutely certain. In lines 15 and 16 we read

L. 15 Âshâdha-sud[dh]a-
daśam[yâm ?]

L. 16 Karkkâṭaka-r[â*]sau sa[m]krânt[ê ?]

ravau puṇya-tithau *i.e.*, 'on the tenth [lunar day] of the bright half of (the month) Âshâdha, the sun having entered into the zodiacal sign of Cancer, on (this) auspicious tithi' *i.e.*, as I take it, after consultation with Dr. Bühler, **on the occasion of the sun's entering the sign of Cancer, or on the Karkâṭa-saṁkrânti**. In lines 24 and 25, of which the former is incomplete at the end and the latter at the beginning, we read—

L. 24 sa[m]vatsara-śata-chatushtayê [sha ?] x x x x x

L. 25 x x x x [sa ?]m 400. 80. 6. Âshâdha śu [10 ?] Âdityavârê ||

The *sha* at the end of line 24 is distinctly visible, but there are certain marks below it, both in the impression and, more clearly still, in the photograph, which would render it possible to read the whole akshara *shâta*, *i.e.* to regard it as the beginning of the word 'shâdâśiti' (88), not of *shâdaśiti* (86), were it not that in the following line the numerical symbol for the unit is distinctly 6, and not the similar symbol for 8. In line 25 the numerical symbol following upon *śu* is decidedly indistinct. What is clearly seen, both in the impression and in the photograph, is the symbol for 10, as it occurs, *e.g.* at the end of the Valabhî grant of Dharasêna II., *ante*, Vol. VIII. page 303, *minus* the curved line on the right; but there are indications that that curved line had been engraved and that therefore 10 was intended. It is more difficult to say, whether certain marks after the symbol for 10 are accidental scratches or intended to denote the unit 1 or 2. Here the actual mention of the tenth in line 15 is a *primâ facie* argument in favour of the former and against the latter alternative.

In all probability, then, the grant is dated—486, on the 10th lunar day of the bright half of the month Âshâdha, **on a Sunday, on the occasion of the sun's entering into the zodiacal sign of Cancer**. But there is just the possibility, that the grant was *made* on the occasion of the Karkâṭa-saṁkrânti, on the 10th tithi of the bright half of Âshâdha, and *recorded* on a Sunday, the 11th or 12th of the bright half of Âshâdha. Under any circumstances the

¹⁵ In A.D. 666 there were two solar eclipses, one on March 11, and the other on September 4; and in A.D. 667 there were also two solar eclipses, one on February 28, and

the other on August 25. In A.D. 665 there *was* a solar eclipse on the new-moon day of the *naga* Jyâishtha, which was April 21.

date, if falling within the 8th century A.D., must, generally speaking, fall on or after June 22, the approximate day of the Karkāṭa-saṁkrānti.

Supposing the date to be recorded in the Chēdi era, and taking that era to commence on July 28 (or, possibly, on August 26), A.D., 249 the corresponding year would be either A.D. 735 or 736, according as the figure 486 denotes the current year or the number of years expired. In A.D. 735 the Karkāṭa-saṁkrānti took place on Thursday, June 23, which was the 13th of the dark half of a month, while the 10th of the bright half of Āshāḍha had fallen already on Sunday, June 5, *i.e.* no less than eighteen days *before* the Saṁkrānti. Neither of the two days can be the day intended.

In A.D. 736, on the other hand, the Karkāṭa-saṁkrānti took place about 8 hours after sunrise of June 22; and the tenth *tithi* of the bright half of Āshāḍha began 21 minutes *after* mean sunrise of June 22, and ended 1h 21m *before* mean sunrise of June 23. The *tithi* therefore, in all probability, was a *kshaya-tithi*, but, under any circumstances, **the Karkāṭa-saṁkrānti, in A.D. 736, did take place during the tenth tithi of the bright half of Āshāḍha.** June 22, however, was a Friday, not a Sunday; and the nearest **Sunday, June 24, was the 12th of the bright half of Āshāḍha**, because the 12th *tithi* of the bright half ended on it, 20h 37m after mean sunrise.

Now, taking into consideration that in the whole century from A.D. 676 to 775, there is not a single year in which the Karkāṭa-saṁkrānti fell on any Sunday which was the tenth of the bright half of Āshāḍha or of any other month, I believe that, if the date must really be referred to the Chēdi era, we have to resort to the other possible interpretation of the date which I have spoken of. And assuming the

grant to have been *made* on the occasion of the Karkāṭa-saṁkrānti, on the tenth *tithi* of the bright half of Āshāḍha, and *recorded* on a Sunday, the 12th of the bright half of the same month, **June 22 and Sunday, June 24, A.D. 736, satisfy the requirements of the case:** and if the tenth *tithi* was a *kshaya-tithi*, which I have good grounds for believing that it was, the reason why the grant should have been *made* and *recorded* on different days, is perhaps not far to seek.

Regarding the Chēdi year, I may finally state that the calculation of the only two available dates in dark fortnights, *viz.* that of the Benares copper-plate inscription of Karkāḍēva (above, No. 1), and that of the Bhēra-Ghāt inscription of the year 928 (above, No. 8, to which however I can attach only little importance), shows the Chēdi year to have been **a northern year**, with the regular *pūrṇimānta* northern arrangement of the months. This is also proved (as was first remarked to me by Mr. Fleet on Mr. Sh. B. Dikshit's authority), by the record in the Jabalpur grant of Gaya-karnadēva, mentioned above, of the occurrence of the Makara-saṁkrānti in the *dark* fortnight of Māgha. For, since the first day of the solar month Māgha must precede the first day of the bright half of the lunar Māgha, the Makara-saṁkrānti, which introduces the solar Māgha, may well take place in the dark half of the lunar Māgha when the latter, as is the case in the *northern* year, precedes the light half; but it cannot do so in the southern year where the dark half of the lunar Māgha *follows* upon the light half of the same month.

In conclusion, I have to thank my friend Professor Jacobi for having allowed me the use, before actual publication, of his Tables, by the construction of which he has rendered a service of the utmost importance to all who take an interest in Indian inscriptions.

STORY OF THE MURDER OF 'ALI 'ADIL SHAH I., FIFTH KING OF BIJAPUR, AS TOLD BY CONTEMPORARY HISTORIANS.

BY CAPTAIN J. S. KING, B.O.S.C.

No detailed account of the death of 'Ali 'Adil Shāh I. has yet been published in English. In the Bijāpur volume of the *Bombay Gazetteer*¹ this event is disposed of in the fol-

lowing words:—"In 1580 'Ali was assassinated in a brawl with one of his servants."

Farishta² gives the following account of it:—"In the year 987 (A.D. 1579-80), as the

¹ Vol. XXIII p. 419.

² Briggs, ed. Vol. III. p. 142 n.

king had no son, he appointed his nephew Ibrâhîm, son of his brother Shâh Tahmâsp, his successor, and the following year he was assassinated by a eunuch, whom he had forced against his inclination to come to his Court from Ahmadâbâd Bidar."

Briggs,³ in a note on this passage, says:—"A more detailed account of this transaction is given by Farishta in the *History of the Kings of Bidar*. He evidently avoids the subject in this place, in order not to give offence to Ibrâhîm 'Âdil Shâh II., the nephew of 'Alî 'Âdil Shâh, under whose patronage he wrote. The cause of the king's death is most disgusting and offensive, and it is by no means attempted to be palliated by Farishta when he mentions it. A modern author of the history of Bijâpur, however, has set forth reasons in defence of Alî 'Âdil Shâh's conduct, and endeavours to prove that Farishta has traduced his memory."

Farishta's "more detailed account" above referred to, is thus translated by Briggs⁴:—

"In the year 987 (A.D. 1579), Murtazâ Nizâm Shâh made an attack upon the remaining part of the Bidar territories, and laid close siege to the capital itself. 'Alî Barîd, thus straitened, sent an envoy to 'Alî 'Âdil Shâh, who replied that if he would make him a present of two eunuchs, whom he named, he would send him assistance. 'Alî Barîd assented; and two thousand Bijâpur Cavalry marched to raise the siege of Muḥammadâbâd Bidar.⁵

"Murtazâ Nizâm Shâh, hearing of the approach of the 'Âdil Shâhîs, and also of the rebellion of his brother, Burhân Nizâm Shâh, at Ahmadnagar, retreated to his capital, and left Mîrzâ Yâdgâr with a body of Qutb Shâhîs, who had joined from Gulkunda, to prosecute the siege; but as soon as the Bijâpur detachment arrived within a few miles of the place, Mîrzâ Yâdgâr retreated, and 'Alî Barîd delivered over the two eunuchs, contrary to their own inclination, to the Bijâpurîs. These two youths were so stung with shame on being transferred from one king to another, that shortly after their arrival at Bijâpur, one of them put 'Alî 'Âdil Shâh to death, as we have before seen in this history."

Khâfi Khân, who enjoys the reputation of

being the most impartial of Indian historians, gives the following account of the murder of 'Alî 'Âdil Shâh⁶:—

"In the year 987 (A.D. 1579-80) he nominated his nephew, Muḥammad Ibrâhîm, son of his brother, Shâh Tahmâsp, as his successor, and gave him full power, whilst he gave himself up to sensual enjoyments.

"When it came to his ears that 'Alî Barîd had two handsome eunuchs, one of whom in beauty, and the other in delicacy, was a reproach to the sun and the moon, he conceived an intense longing to become possessed of them, and, accordingly, sent a message (to 'Alî Barîd) asking for them. 'Alî Barîd at first was firm in refusing; but afterwards, on account of his excessive entreaty, he sent them both to 'Alî 'Âdil Shâh. Each of these eunuchs knew why he had been sent for; and the elder one, who had a hankering after evil, concealed a knife in the waist-band of his drawers, and awaited the opportunity for the infliction of punishment.

"At last, one night, 'Alî 'Âdil Shâh summoned him into his private apartment, and endeavoured to lie with him. The eunuch, on getting the opportunity, plunged that knife into his hypochondria with such force as to put a stop to all sensual desire; and in the year 988 (A.D. 1580) 'Alî 'Âdil Shâh hurried from this world to his permanent abode; and, in retribution for the crime of one, the two eunuchs were put to death."

The next account of this occurrence I extract from a very rare Persian MS. history of the 'Âdil Shâhî dynasty of Bijâpur, entitled **Basâtinu's-Salâtin**, by Muḥammad Ibrâhîm az-Zubairî, completed, as the author himself informs us, in A. H. 1240 (A.D. 1821). General Briggs published his translation of Farishta in 1829. From these dates, and from the fact that the copy of this MS. now in the Royal Asiatic Society's Library belonged to General Briggs, I conclude that this is the history to which he alludes in his footnote already quoted; but before making any further remark on the subject, I shall proceed to translate the passage:—

"Alî 'Âdil Shâh's twin sister (*ham-shîra*), named Tâñibâi Sultân, had been married to

³ Vol. III. p. 142n.

⁴ Vol. III. p. 498.

⁵ So in Briggs' text, but the more usual appellation is

Ahmadâbâd Bidar, as above

⁶ *Muntakhabul Lubâb*

'Alī Barīd; and having died without issue, her movable property, consisting of valuable jewellery and other goods, remained in 'Alī Barīd's house; and as by Muhammadan law it was allowable for 'Alī 'Adil Shāh to demand restitution of these, he at once sent a messenger to ask for them. 'Alī Barīd returned all the effects except the jewellery, the claim for which still remained unsettled, till, in the year 988 (A.D. 1580), Kāmil Khān renewed it, and petitioned 'Adil Shāh, saying:—'There is an old-standing connection between me and Barīd; with your permission I will send a person on my account and recover the goods.' 'Adil Shāh replied:—'I have a large claim against him, and can claim it by law.' Kāmil Khān, considering this as equivalent to permission, brought General 'Alī Āqā into the presence of the king, and after giving him the necessary instructions, despatched him to Bidar.

"'Alī Āqā returned after four months, and presented to the king a portion of the jewellery, together with two eunuch slaves who had formerly been in the service of 'Alī 'Adil Shāh's twin sister, above mentioned.

"One night 'Adil Shāh summoned to his private apartments one of those eunuchs, who was more intelligent than the other, in order that he might make inquiries about his sister's jewellery. This eunuch was of an evil disposition, for as soon as he came into the presence of the king, although there were two or three servants standing by, he plunged a dagger up to the hilt in the king's breast, so that it came out at his back. The king, wounded as he was, arose from the chamber, and reached the courtyard, where he fell, and those who were near raised a clamour."

Rafī'u'd-dīn Shīrāzī,⁷ who held the appointments of Havāldār-i-Mahallāt, Khān-Sālār and Treasurer, says:—

"I was present outside the palace at that time, as also was Afzal Khān, who had been sitting there with some people transacting business. At that moment they had just got up to go to their houses; but he had not quite reached the gate of the fort when a shouting and clamour arose. On going inside I found the king lying bathed in blood. Afzal Khān came running back, and, after looking at the

king and feeling his pulse, cried out:—'Alas! Dust is on our heads!' Then, raising the king, we laid him on a couch, and went outside. The murderer had remained in the private apartment, and some one wished to enter it and bring him to punishment, but he had fastened the door on himself. However, next day he received the punishment due, and the other eunuch was put to death by the slaves on the same day.

"The people of the city, hearing of the death of the king, rushed in crowds to the gate of the fort that night. The nobles, grandees and *amīrs* also, both superior and inferior, assembled at the gate, but did not obtain admission.

"After morning prayers, some one came to the gate and cried out:—'All the Ministers and nobles are assembled at the gate, and, with compliments, send this message to the prime minister, Afzal Khān:—'We have passed the whole night here, like fish without water, in disquietude and anxiety, and we are all anxious to know from you what arrangements have been made for carrying on the government.' Afzal Khān replied:—'I await the good pleasure of my colleagues; whatever they advise, and whomsoever they may confirm in the sovereignty, they are free to do as they please.' The nobles, on hearing this, held council, and confirmed with oaths the promises as to the hereditary succession. They then sent Mīr Murtazā Khān Ānjū, who went near the gate, and proclaimed the decision of the council, saying:—'Shāh Kamālu'd-dīn Fath-ullah, being *vakil* on your part, with the approval of all the nobles has agreed that we shall confirm in the sovereignty the king's nephew, Prince Ibrāhīm, who is the rightful heir, and whom the king during his lifetime appointed and educated as such. Also that you shall be Prime Minister, as formerly; and the other offices be filled by whomsoever you may please.' Afzal Khān replied:—'I cannot undertake this important affair; appoint some one else.' Murtazā Khān said:—'At all events, you and the nobles can assemble in council, and whatever you determine upon will be confirmed.' Afzal Khān said:—'A great crowd is assembled here, and if we open the gate there will be a rush of the common people, and

⁷ *Tasīr-i-Mulūk*

perhaps a disturbance may arise. The best plan is for you with only three or four selected persons to come inside."

"Then Shah Kamālu'd-dīn Fathu'llah, Kamāl Khañ, Murtazā Khañ and Manjan Khañ, youngest son of Kishwār Khañ, and son-in-law of Kamāl Khañ, went inside, and, after taking counsel together, went to the door of the *haram*, and, bringing forth Ibrāhīm 'Ādil Shāh, took him to the summit of a tower; and, seating him with much more ceremony, raised over his head the gold-embroidered umbrella."

According to **Mirzā Rafi'u'd-dīn Shirāzi**,

author of the *Tazkiratu'l-Mulūk* (who was an eye-witness of the occurrence), 'Alī 'Ādil Shāh I. was murdered on Monday, the 24th of the month Safar, A. H. 988, at the eighth hour of the night, which corresponds to 2 a. m. on the 19th March 1580.

The above detailed account of what followed immediately after the murder is interesting, and probably true in every particular; but in relating the circumstances which led to the murder, Rafi'u'd-dīn seems to me to have failed to remove the stigma cast on the memory of 'Alī 'Ādil Shāh I. by Farishta and Khāfi Khān.

FOUR REWAH COPPER-PLATE INSCRIPTIONS.

BY PROFESSOR F. KIELHORN, C.I.E.: GÖTTINGEN.

In the *Archæol. Survey of India*, Vol. XXI. pp. 145-148, Sir A. Cunningham has given an account of four copper-plate inscriptions from **Rēwah** (properly **Riwām** or **Rimām**) in Central India. At Mr. Fleet's request, I shall edit here three of those inscriptions, and give extracts of whatever may be important in the fourth, from excellent impressions supplied by him. In a concluding paragraph I shall furnish, from the four inscriptions together, a genealogical list of the *Mahārāṇakas* of **Kakkarēdikā** (**Kakarēdikā**, or **Kakarēḍi**), the chiefs by whom the donations recorded in these copper-plates were made. Following Sir A. Cunningham, I denote the four inscriptions by the letters A., B., C., and D.¹

A.—Copper-Plate Grant of the Mahārāṇaka Kirtivarman.

The (Chēdi) year 926.

This inscription is on a **single plate**, measuring about 13" by 9½", and inscribed on one side only. The surface of the plate itself is smooth; but, for the protection of the writing, strips of copper about ¾" broad are fastened by rivets along the edge of the top and the two sides; and the bottom edge was originally protected in the same way, but the strips here have been torn off and lost. The preservation of the inscription is perfect, and there is hardly any letter which is not clear and distinct in the impression.—In the upper

part of the plate, and secured by a strong rivet passing through the plate, there is a thicker and broader strip of copper, which, towards the end projecting above the plate, is turned over so as to catch and hold a plain copper ring about ⅝" thick and 2½" in diameter. There are no indications of any seal having been attached to the ring.—The **weight** of the plate, with the ring, is 164½ tolas.—The **average size of the letters** is between ¼" and ⅓".—The **characters** are Devanāgarī of about the 12th century A.D. The formation of the letters betrays some want of skill, and I may particularly note that the sign for *ha* is often badly formed, and that it is sometimes difficult to distinguish between the palatal and dental sibilants, and between the signs for *cha* and *va*.—The **language** is Sanskrit, employed by a person who was either very careless or ignorant. The most glaring mistakes against the rules of syntax will be pointed out in the notes on the text. Wrong forms are, e.g., the Genitive *dvij-ārthindām* for *dvij-ārthindām*, in line 8, the Singular Dvandva-compound *chandr-ārka-mēdinī*, in line 15, and the Past Pass. Participle *utkirṇātām*, in line 19.—In respect of **orthography**, I may note that *ba* is throughout written by the sign for *va*, and that the dental sibilant is occasionally used for the palatal sibilant; thus we have *paramēscara*, line 2; *māhēscara*, line 3; *Kausika*,

¹ No information is forthcoming as to the circumstances under which the plates of these four inscriptions were originally discovered. They will eventually be

deposited in the British Museum; having been placed in my hands for that purpose by the Rājā of Rewah—J. F. F.

line 9; *pravésuh*, line 13, *sudhigati* and *Rājésvara*, line 18. Other mistakes, such as the occasional omission of an *akshara*, the employment of a short vowel in place of a long one and *vice versa*, the addition of a superfluous superscript *r*, the use of *ra* for *cha*, of *ksha* for *sha*, and of *kha* for *sha*, for which either the writer or the engraver is responsible, will be drawn attention to and corrected in the text.

After the usual "Ôm, may it be well!" and a verse in honour of Hêlamba, *i.e.* Hêramba (Gaṇêsa), the inscription refers itself, in lines 2-4, to "the reign of victory of the *paramabhattachâraka mahârâjâdhirâja paramêśvara*, the devout worshipper of Mahêśvara (Śiva), the illustrious **Jayasimhadêva**, the lord over **Trikaliṅga**, who by his own arm had acquired the (title of) lord over the three *Râjas*, (*viz.*) the lord of horses, the lord of elephants, and the lord of men.—and who meditated on the feet of the *paramabhattachâraka mahârâjâdhirâja paramêśvara*, the illustrious **Vâmadêva**." And the inscription is dated, in line 19, in the year 926, and more accurately, in line 14, "the year 926 (expressed in decimal figures only), on the fourth *tithi* or lunar day, in the bright half in the month Bhâdrapada, on Gura-dina or Thursday."

The epithets, applied here to **Jayasimhadêva**, are exactly those applied in the Jabalpur copper-plate inscription² to the **Chêdi** (or **Kalachuri**) ruler of **Tripuri**, **Gayâkarnadêva**, the father of **Jayasimhadêva**, and, in the Lâl-Pahâr rock-inscription³ of the [Chêdi] year 909, to **Narasimhadêva**, the elder brother of **Jayasimhadêva**, and, in the Kumbhî copper-plate inscription⁴ of the [Chêdi] year 932, to **Vijayasimhadêva**, the son of **Jayasimhadêva**. And since our inscription, to judge from the characters in which it is written, belongs to about the 12th century A.D., there can be no doubt that the prince **Jayasimhadêva** mentioned here, is the **Chêdi** ruler of that name, whom from a Têwâr inscription⁵ we know to have ruled in the [Chêdi] year 928, the younger son of **Gayâkarnadêva**, and that the year 926, in

which the inscription is dated, must be referred to the **Chêdi era**.

It is more difficult to explain the exact significance of every one of the epithets used with reference to **Jayasimhadêva** and his relatives. As to the title 'lord over the three *Râjas*,' etc., it may suffice to state that the **Chêdi** rulers share it with some of the Râthôr princes of Kanauj.⁶ And regarding the expression *Trikaliṅgâdhîpati* 'lord over the three *Kaliṅgas*,' I agree with Sir A. Cunningham⁷ in considering the term **Trikaliṅga** to denote, or to be an older name of, the province of **Têliṅgana**, and I may mention that the same title *Trikaliṅgâdhîpati* occurs also in lines 3 and 43 of the copper-plate inscription from **Kapâlêśvara**, in Orissa, published *ante*, Vol. V., pp. 55-57. But I am unable, at present, to explain properly the phrase "meditating on the feet of the *paramabhattachâraka mahârâjâdhirâja paramêśvara*, the illustrious **Vâmadêva**," which is used of **Jayasimhadêva** and his elder brother, as well as of his father and son. In accordance with ordinary usage, that expression ought to mean that **Vâmadêva** was one of the ancestors of the princes who are said to meditate on his feet, but none of the inscriptions of the **Chêdi** rulers of **Tripuri** or **Ratnapur** which are known to me, mention a prince **Vâmadêva** in the genealogical lists which they contain.

As regards the date, I have shown, *ante*, page 219, that the corresponding European date, which in my opinion satisfies the requirements of the case, is **Thursday, August 21, 1175**.

In line 4, our inscription goes on to state that in the town of **Kakkarêdikâ** there was once a *Mahârâjaka* **Jayavarman** (line 6), born in the **Kaurava** *vanša*. His son was the *Mahârâjaka* **Vatsarâja** (line 7); and his son again was the devout worshipper of Mahêśvara (Śiva), the *Mahârâjaka* **Kirtivarman** (line 9). This chief, who clearly owed allegiance to the **Chêdi** ruler **Jayasimhadêva**, on the date mentioned, and on the occasion of making the funeral oblations in honour of his deceased father **Vatsarâja** (line 11), granted the village of **Ahaḍâpâda**, situated

² *Archæol. Survey of India*, Vol. IX, p. 88.

³ *Ib.* Vol. IX, plate II.

⁴ *Journal Beng. As. Soc.* Vol. XXXI, p. 119.

⁵ *Journal American Or. Soc.*, Vol. VI, p. 512.

⁶ See *ante*, Vol. XV, p. 9, note 52.

⁷ *Ancient Geography of India*, p. 519.—The **Chêdi** rulers spoken of were styled 'lords over *Trikaliṅga*', their capital was *Tripuri*; and according to Pandit Bhagvanlal Indrap the **Chêdi** era is identical with the era of the *Traikâlikas*, a name derived from *Trikûta*. This may be accidental, but it may as well be pointed out.

in the **Khaṇḍagahā pattalā**, to two Brâhmanas, the **Thakura Mahāditya** and the **Thakura Śīlaṇa**, sons of the **Thakura Chaturbhujā**, son's sons of the **Thakura Gayādhara**, and sons of the son's son of the **Thakura Trilôchana**, of the **Kausika gôtra**, and whose three *pravaras* were **Audala**, **Viśvāmitra**, and **Dêvarāta**.

Lines 15-18 contain some of the customary benedictory and imprecatory verses; and lines 18 and 19 state that the inscription was written, with the consent of the **Thakura Ratnapāla**, by the **Thakura Vidyādhara**, son of **Mālhe**, son's son of **Dhârêśvara**, and son of

the son's son of **Râjêśvara**, and engraved by the workers in iron **Kûkê** and **Kikaka**.—In all this part of the inscription, from line 4 to 19, there is nothing which calls for any particular remark.

The town of **Kakkarêḍika** is the modern **Kakrêri**, Long. 81° 17' E., Lat. 24° 56' N., 'a large place on the table-land at the head of the principal Pass. the Mamani Ghât, leading to the west towards Bânda and Kâlanjar and Mahôba.'¹⁸ The village granted, and the *pattalā* in which it was situated, I am unable to identify on the maps at my disposal.

TEXT.⁹

- 1 Ôm¹⁰ svasti || Amôdaś¹¹=cha pramôdaś=cha sumukhō durmmukhas=tadā(thā) |
avighnō vighna-karttā cha Hêlamvô(mbô) Gaṇa-
- 2 nâyakah || Paramabhaṭṭāraka-mahârâjâdhirâja-paramêśva(śva)ra-srî-Vāmadêva-pâd-
ânuḍhyâta-parama[bha*]tāraka-
- 3 mahârâjâdhirâja-param-śvara-paramamâhêśva(śva)ra-Trikaliṅgâdhipati-nija-bhuj-ôpârjjit-
âśvapati-gajapati-narapati-râjatra-
- 4 y-âdhipati-śrîmaj-Jayasimhadêva-vijaya-râjyô || Aś'sha-viś'sh-ârtha-¹²samanvitâyām dēva-
dvija-guru-tarp¹³-âśva-nishêvitâyām |¹⁴ **Kakkarêḍika** sbbhidhânâyām
- 5 nagaryyâ[m*] **Kaurava**-[va*]nya¹⁵(mśa)-samabhûta upârjjakô śśesha-râjagun-âlamkṛita-
śaīrah parama-mâhêśvarô mahā-vra(bra)hmanyô śnêka-dân-ôḍaka-prakshālita-vâ-
- 6 mêtara-kara-prakôślthah | anêka-saṁgrâma-bhūmau kari-ghatâ-kumbha-visravaṇa-¹⁶
pañchânanah samasta-kshatriya-garva-hṛidbhih¹⁷ | mahârâṇaka-śrî-Jayava-
- 7 rm[â*] nâma âsīt | (||) Êtasya putrô durvâra-vairi-vâraṇa-[samva]rttah | Karṇṇa
iva kuṇḍala-kirita-dhârî | mah[â*]râṇaka-śrî-Vatsarâjô=bhût ||*]
- 8 Êtasya putrô mahā-mâhêśvarah¹⁹ kalpavṛkshavat dvij-ârthi(rthi)nām vâñchita-phala-
pradô=rjjuna iva ghâpên=ekshu(shu)-kôti-samutsârit¹⁹-ârâti-ku-
- 9 lô mahârâṇaka-tri(śrî)-**Kirttivarmā**²⁰ Kausi(śi)ka-gôtrasy=Audala-Viśvāmitra-Dêvarâ[ta]-²¹
trih²²pravarêbhyah²³ yajana-yâjan-âdhyayan-[â*]dhyâ-
- 10 pana-dâna-pratigraha-shatkarma-patêbhyah | thakura-śrî-Trilôchana-prapautrêbhyah |
thakura-śrî-Gayādhara-pautrêbhyah | thakura-śrî-Chaturbhu-
- 11 ja-putrâbhyâm thakura-śrî-Mahāditya-Śīlaṇa-vrâ(brâ)hmaṇâbhyâm **Khaṇḍagahā**-
pattalâyām **Ahaḍapâḍa-grâma** |] sva-si-
- 12 mâ-paryantaś=va(cha)tur-âghâta-viśuddhah sa-jala-sthalah s-âmra-madhûkah
sa-lavanâkarah sa-gartt-ôkha(scha)ruh sa-nirga-
- 13 rma(ma)-pravêsa(su)h sa-gôprachârah sa-nidhirmi(ni)kshêpah kalyâṇa-dhanah sa-karô
mâtâ-pitrôr=âtmanaś=ch=ânamta(nta)-punya-yaśô-vivṛiddhayê
- 14 samvat 926 Bhâdrapada-mâsê **śukla-pakshê va(cha)turthyâm tithau Guru-**
dinê râṇaka-śrî-Vatsarâjasya nimittê pañḍârchana-sthâ[n]ê sampra-

⁹ *Archæol. Survey of India*, Vol. XXI, p. 146.

¹⁰ From the impression. ¹¹ Expressed by a symbol.

¹² Metre, Ślôka (Anu-hubh).

¹³ *Viś'sh-ârtha* I take to be used in the sense of *viś'sh-ârtha*.

¹⁴ This appears to be a mis-take for *guruvarjya* 'excellent teachers.'

¹⁵ Here and in other places below, which it is unnecessary to point out separately, the sign of punctuation is superfluous.

¹⁶ This *akshara* was intended to be *na*.

¹⁷ *Visravaṇa* appears to be used in the sense of *raṇa*. 'a lion to tear open.'

¹⁸ Originally—*sur'k*.

¹⁹ Originally *sa-samutsârit*.

²⁰ On the top-margin we have the *akshara nâ*, in what appears to be a more modern handwriting, with an intimation that it should be inserted here. *Kirttivarmâ* is thereby changed to the Instrumental *Kirttivarmâ*, which must be construed with *sa-pañḍârchana* in line 15, but which does not agree with the preceding Nominative cases.

²¹ This *akshara* appears to be *bra*, altered to *ta*. Compare *âśvat'gma-rantāsûta*, XII 14, 2.

²² Read *tripra*.

²³ Here and in the following the Plural ending *âbryah* is put wrongly for the Dual ending *âbhyaṁ*.

[illegible]

- 15 dattah[¹¹*] Ōm svasti || Yé²⁴ bhavānti kulê=makam śūrā virās=cha saṃgaurē
tê pālayāntu mē dānam yāvat candra-ārka-m. dinī || Va(ba)hubhiḥ²⁵.
16 r=bhuktā vasudhā rājabbih Sagar-ādibhiḥ[^{1*}] yasya yasya yadā bhūmis=tasya
tasya tadā phalam || Kuś²⁶-ōpagraha-hastābhyām [ch't=ta] Rāma-
17 Lakshmanau[¹¹*] Sa-datt[^{a*}]m vā²⁷ para-dattām va yō haret(ta) vasumdharam[^{1*}] sa
vishtthāyām kṛimim(mir=)bhūtvā pi[^{1*}]bhil saba majjati || Taḷagānām saha-
18 sr̥ṇa aśvanē[^{dhia*}]śatēna cha | gavām kōṭi-pradānēna bhūmi-harttā m.
su(su)dhyaṭi || Ṭha²⁹ | śrī-Rājēśvara-prapautraḥ | ṭha | Dhāreśvara-pautrēna
19 ṭha | Māhē-putrēna | ṭha | Ratnapālasya samatya ṭha | Vidyādhareṇ=ālēki |
Lōhakāra-Kōkē-Kīkakābhyām³⁰=utkṛṇṇitam=iti || **Saṃvat 926** [11*]

**B.—Copper-Plate Grant of the
Mahārāṇaka Salakhaṇavarmadēva.**

The (Vikrama) year 1253.

This inscription, again, is on a **single plate**, measuring about 15 $\frac{3}{4}$ " by 9", and inscribed on one side only. The plate is quite smooth: the edges of it being not fashioned thicker, nor turned up, nor protected in any way. As the result, the preservation of the inscription is only fairly good; for, the surface of the plate is a good deal worn, especially in the proper left half, down to about line 14, and, in the right half, from about line 8 to 14, so that some *aksharas* here are only faintly visible, and a few others are altogether illegible. At the same time, all that is historically important, is clear and distinct; and, so far as the actual decipherment is concerned, not in the least doubtful. —In the upper part of the plate, there is a **ring-hole**; but the ring, with any seal that may have been attached to it, is not now forthcoming.—The **weight** of the plate is 192 $\frac{1}{4}$ tolas.—The **average size of the letters** is about $\frac{1}{4}$ ". The **characters** are Devanāgarī of about the 12th century A.D., and very similar to those of the grant A.—The **language** is Sanskrit, employed by a person of little knowledge, and therefore disfigured by serious grammatical blunders. Thus we find, in lines 7 and 8, the construction *sā=ham . . . samā-jñāpayati vōdhayati cha* 'I . . . command and inform'; in line 9 and elsewhere, a number of crude forms used instead of Nominative cases: in line 15, the construction *yat=pradattām . . . pālānyā rakṣānyāś=cha*, in line 6, the compound *śuta-draṇ* 'two sons' for *śuta-draṇam*

or *śuta śuta*; ³¹ and in line 14, *vāripautra* for the very common *mātāpitrēḥ*.—In respect of orthography, I may note that *ba* is written by the sign for *va*, except in *bahūna*, ³² line 5, and that the palatal and dental sibilants are often confounded, even in ordinary and well-known words. Thus, we have *-sarmam*, for *-śarmam*, several times in lines 10-12, *masā* and *sāsanaṭv* in line 14, *vasagōḥ* in line 15; and on the other hand, we have *śūlshma*, for *sūlshma*, in line 2, *suta* in line 6, *śamāṇam* in line 19; and the same wrong use of *śa* for *sa* has caused the employment, in line 6, of *śrīmat-Chhalakṣaṇa* for *śrīmat-Salakṣaṇa*. Carelessness on the part of the writer or engraver is responsible also for the wrong verse in honour of Bhārati in lines 1 and 2, for the mutilated verse in line 16, and for the occasional employment of the dental for the lingual nasal, of *ca* for *cha*, of *ma* for *va*, and for other mistakes which will be pointed out in the text.

Opening with the words "Ōm, may it be well" and two verses in honour of the god Brahman and of Bhārati, of which the first occurs also at the beginning of the inscriptions C and D, our inscription refers itself, in lines 2-4, to "the auspicious reign of victory of the *paramabhāttāraka mahārājādhirāja paramēśvara*, the devout worshipper of Mahēśvara (Śiva), the illustrious **Vijayadēva**, the lord over **Trikaṇṇa**, who by his own arm had acquired the (title of) lord over the three *Rājas*, (viz.) the lord of horses, the lord of elephants, and the lord of men,—and who meditated on the feet of the *paramabhāttāraka mahārājādhirāja paramēśvara*, the devout wor-

²⁴ Metre, Ślōka (Anuṣṭubh), here and in the following verses.

²⁵ This sign for *vr̥* is superfluous.

²⁶ This appears to be the beginning of a verse which I have not met with elsewhere. I am somewhat doubtful about the words put in brackets.

²⁷ This *ei* is put in by mistake.

²⁸ Originally *va*.

²⁹ Originally *bhagavān*.

³⁰ See *o. t.*, page 8, note 3.

³¹ In this particular word, the proper sign for *va* has been preserved also in other inscriptions, in which it is otherwise denoted by the sign for *va*. See Hultsch, *in Zeitschr. D. M. Gesellschaft*, Vol. XL, p. 50.

³² *See Hultsch.*

shipper of Mahēśvara (Siva), the illustrious **Vāmadēva**." And the inscription is dated, in line 13, "the year of years 1253 (expressed in decimal figures only), on the seventh *tithi* of the lunar day, in the dark half in the month Margaśīra, on Sukra-dina or Friday."

With the exception that Vāmadēva is styled here "the devout worshipper of Mahēśvara (Siva)," which is sufficient to prove that Vāmadēva cannot be Siva himself,²² the epithets here applied to Vijayadēva are the same as those applied to Jayasīmhādēva in the inscription A. And as the date of the inscription must clearly be referred to the Vikrama era, there can be no doubt that the Vijayadēva here spoken of is the son of Jayasīmhādēva of the inscription A. Vijayasīmha, the Chēdi ruler of Tripuri, of whom we possess the Kumbha copper-plate inscription of the Chēdi year 932 = A.D. 1180-81.

As regards the date, the 7th of the dark half of Margaśīras, of the Vikrama year 1253 current, by the northern reckoning, corresponds to **October 27, A.D., 1195**, which was a **Friday**, as required. On that day, the seventh *tithi* of the dark half ended about 7h 35m after mean sunrise.

From lines 4-6 of the inscription we learn that at the capital of **Kakarēdi** there was once a personage named **Dhāhilla**,²³ who was the object of respect for all princes. After him came **Vājūka**, **Dandūka**, **Khōjūka**, and **Jayavarman**, whose exact relationship to Dhāhilla or to one another cannot be determined from the present inscription. Jayavarman's son was **Vatsarāja**; and that chief had two sons, head-jewels of *Sāmantas* or feudatory lords, **Kirtivarman** and **Salakshanavarma-**

dēva (or **Salakshanavarmadēva**, as the name is written afterwards) of whom the former succeeded his father while he himself was succeeded by **Salakshanavarmadēva**.

In lines 7-14 the chief **Salakshanavarmadēva**, who had attained the five *mahāsabha* and who evidently owed allegiance to the Chēdi ruler Vijayadēva, informs the people and the officials concerned, that on the date mentioned above he gave the village of **Chhidaudā**, in the **Kūyisavapālisa** *pattana*, to certain Brāhmanas, son's sons of the son (or sons) of the *Thakura* Mādhyava of the Kanšilla *ghāra*, and whose three *pradotas* were Kaušilla, Viśvāmitra, and Devarata (?). The village thus granted was divided into five *paṭas*²⁴ or shares, of which two were given to Rāmasārman, Garhāsārman, and Damarsārman, sons of—(?), while one share went to ——sārman (?), the son of Chithu, one to Paitāsārman, the son of Pithana, and one to Haridattaśārman, the son of Śridhara.

Lines 14-19 contain the usual admonition to give to the grantees whatever might be due to them, and to protect them in the possession of their property, and some of the customary benedictory and imprecatory verses. And the concluding line 20 appears to say that the inscription was engraved by Kukē and his son, and to contain some statement, which I do not understand, concerning the quantity of grain necessary for sowing the field-granted.

There is nothing in lines 4-20, which calls for any further remarks. I have only to add that I am unable to identify the village and the *pattalā* mentioned in the inscription on my maps.

TEXT.

1. Ōm ? svasti || Naga-gaṇaṁ²⁵ vyapadamaṁ nara-tya-mā²⁶ siva'm, parama-kāraṇa-m ||
bhāva-grahyaṁ paṇatāṁ²⁷ jya-ot-saśma-m sad-Vrat(bra)hmaṇē naraḥ || (10)
Suddho²⁸ hṛdaya-kṣaṇ-ā-tri-śa-vaḥ n-rīva-ś²⁹ dhya.
2. yaṇti-ya-mā³⁰ muni-tya³¹ mōkṣa-śaṁ phala-paṇā³² Bhāratī kṛtsukṣmā sā pyati ||
Paramabhāṭṭa-ka-mahārājādhirāja-paramaśvara-paramamā-
3. nēśvara-~~śi~~-Vāmadēva-paṇi-maṇi-śa³³ paramabhāṭṭa-ka-mahārājādhirāja-paramaśvara-
paramamānēśvara-Trikali[ng]a-Bhupati-śa³⁴ bhāṇa-śa³⁵ pyati ||

²² See *Antiquary*, *Series of India*, Vol. XXI, p. 104.

²³ See p. 104.

²⁴ For the word *paṭa* see also *Antiquary*, Vol. XV, p. 20, v. 150-75.

²⁵ For the name *gaṇa* see *Antiquary*, Vol. XXII, p. 104.

²⁶ For the word *tya* see *Antiquary*, Vol. XXII, p. 104.

²⁷ For the word *paṇa* see *Antiquary*, Vol. XXII, p. 104.

²⁸ For the word *dhya* see *Antiquary*, Vol. XXII, p. 104.

²⁹ For the word *śa* see *Antiquary*, Vol. XXII, p. 104.

³⁰ For the word *pyati* see *Antiquary*, Vol. XXII, p. 104.

³¹ For the word *śa* see *Antiquary*, Vol. XXII, p. 104.

³² For the word *śa* see *Antiquary*, Vol. XXII, p. 104.

³³ For the word *śa* see *Antiquary*, Vol. XXII, p. 104.

³⁴ For the word *śa* see *Antiquary*, Vol. XXII, p. 104.

³⁵ For the word *śa* see *Antiquary*, Vol. XXII, p. 104.

१ सिद्धिनिर्वाणपर्वतस्य शिवाय मत्ता कता नावद्यास्य
 २ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 ३ नतीरश्वासा मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 ४ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 ५ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 ६ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 ७ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 ८ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 ९ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 १० मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 ११ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 १२ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 १३ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 १४ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 १५ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 १६ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 १७ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 १८ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 १९ मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा
 २० मत्ता मुनयः। सो दुर्महापर्वतस्य ननीना नतीरश्वासा

W. GRIGGS, PHOTO-LITH.

SCALE 60.

J. F. FLEET, BO. C. S.

- 4 śva[pa]ti gajapati-narapati-rajatray-ādhipati-śrīmad-Vijayadēva-kalyāṇa-vijaya-rājyē 1(11)
Ka[ka]rēdyā[m] ra[ra]jādihānyām **Dhāhi[llō** nām=a[bhavat | Sa cha mā-
- 5 [nyō]=bhavat=sarvva-nar-śvarājām [1*] Tasmād=Vājūkō **Dam̐dūkas**=ch=āpi [kra-
mataḥ : ?]¹⁰ **Khōjūkō Jayavarmma** cha babhūva tad-a[nantarā]¹¹ [1*] [Atha
Jayavarmmadēvasy=āpa : [tyam **Vatsarāja**]-[su]-
- 6 tō=bhava[t t] sāmanta-śrōratnō[tnō] yēna jātau śu(su)ta-dvau | **Kirttivarmma**
sutō jyēsthāḥ prāpta-pitṛipadam¹² sva[taḥ] | śīmach-**Chha**¹³[laksha]navarmma-
[dē]vō=pi kramād=ra-
- 7 jyam=avāpa yāḥ 1(11) Sō=ham samasta-prakṛi[shṭ]-ōpēta-samadhiyata-pañchamahāśayd(bd)-
ālankāra-virājamāna-śi-**Salakhanavarmmadēvō** vijayī 1* **Kūyisavapālisa-**
- 8 pattalāyām **Chhiḍau[dā]**-grāma-nivāsināḥ samasta-praja-lōkān=anyāmś=cha yathāsthān-
ādhiśthitān samājñapayati¹⁴ vō(bō)dhayati¹⁵ cha | Veditam=astu [bha]va[tām*]
grā-
- 9 mō=yam=asmābhiś=chatuṛgṛhātaviśuddha-¹⁶ sajalasthala-sāmramadhūka-sagarttōshura-nidhi-
nikshēp-akāśōtpatti-su(sva)śmāparyanta-savanatṛipamāḥigapak-hikhani-
- 10 gōcharaparyantaḥ 11 Kauśilla¹⁷-gōtrāya Kauśilla-Viśvamitra-Dēvarāja(ta :)-tri-pravarāya |
tha 1¹⁸ Mādḥava-prapautṛāya¹⁹ Mah[— na]-putrāya [Rāma]sa(sa)rmmaṇē
vrā(brā)hmaṇāya | ta-
- 11 thā Gā[thē]sa(sa)rmmaṇē vrā(brā)hmaṇāya | tathā Dāmarasa(sa)rmmaṇē vrā(bra)-
hmaṇāya | ētēśam pada 2[1*] tha Mādḥava-prapautṛāya [Ch[ī]th]u-putrāya
[— m—f]sa(sa)rmmaṇē vrā(brā)hmaṇāya | pada 1 [1*] tha |
- 12 Mādḥava-prapautṛāya Pithana-putrāya Paitēsa(sa)rmmaṇē vrā(brā)hmaṇāya pada 1 [1*]
that Mādḥava-prapautṛ[ā]ya Śrīdhara-putrāya Haridattasa(sa)rmmaṇē vrā(brā)-
hmaṇāya pa-
- 13 da 1 [1*] ēvaṁ grāmasya pada 5 [1*] samvatsarāṇām sa[m]vata(t) 1253
Mārggasira-māsē krishṇa-pakshē saptamyām tithau **Sukra-dinē** **Kaka-**
rēdyām sthānē snātva Śivam pra-
- 14 pūjya mātṛi(ta)pitṛōr=ātmanaś=cha puṇya(hya)-yasō(śō)-vivṛiddhayē ei[ē*]bhyō vrā(brā)-
hmaṇaṇ[ē]bhyō grāmō=yam sà(śa)sanatvō²⁰ pradattaḥ | Matv=ai[va]m=ā[ī]n[ā]*ā-
vidhēyibhūya sarvvaṁ=ē-
- 15 t bhyah pradātavyam | yat=prada[ttam]²¹ maya mam=ājñāva-sa(śa)gaiḥ sāmant-
ādibhir=api palaniyā(yam) rakshanīyāś(yam)=ch=ēti 1(11) Bhavanti ch=atra
puṇya-ślōkah |
- 16 Sarvvān²²= tān bhāvinaḥ pāthav- mdrā[n bhū]vō bhuyō yāchita²³ Rā | sāmāny[ō]=
yam dharmanah sa tu nṛpāṇām kāl- palaniyah²⁴ 1(11) Śamkham²⁵
bhadra-śanām
- 17 chha 1* trān var-āśvaṁ vara-vārapāṇā tāsya vi(chi)hnaṁ phalam= [ē tat=
Puraṇdara 11 Va(ba)huldhī = 11 rajabhiḥ Sagar-ādibhiḥ | yasya
11 Bhūmim yāḥ pratyegilna(hyā)ti
yāś=cha bhūmim pray- 11 tau puṇya(hya) karmmaṇau
niyatau svargga-gā-

¹⁰ After this there is a sign of puncta-
been struck out.

¹¹ This passage and others below to
the concluding word of the chapter.

¹² Perhaps altered to *prāpta*.

¹³ i.e. *śūdras* who are the *śūdras*.

¹⁴ Here an *ti* in the original is super-
fluous to point out separately.

¹⁵ Here the third *ti* of the first.

¹⁶ Here and below the *ti* has been
omitted through care.

¹⁷ is a derivative from *Kauśilla*.

¹⁸ *Ch* = *Ch*.

¹⁹ Draw attention to the fact that the names of
the grants are not given.

²⁰ By the grants C and D the Locative case
is used instead of the more common Instru-

²¹ *Matv* = *Matv*.

²² *Sarvvān* = *Sarvvān*. ²³ *Yāchita* = *Yāchita*.

²⁴ *Palaniyah* = *Palaniyah*.

²⁵ *Samkham* = *Samkham*.

²⁶ *Vara* = *Vara* here and in the following.

- 2 Dhyān⁶⁷-aikatān[a*]-manasō vigata-prasā(sā)rāḥ paśyanti yaṁ kim=api nirmalam=
advitīyaṁ | jñān-ātmanē vighaṭit-ākhi-
- 3 la-va(ba)ndhanāya tasmai namō bhagavatē Purushōttamāya || Jayanti⁶⁸ Vā(bā)-
nāsura-mauli-lālitaḥ kach-āśya-chūḍāma-
- 4 nī-chakra-chumvi(mbi)naḥ | sur-āsura-ādhiśa-śikhānta-śāyinō bhava-chehhidas=
Tryamva(mba)ka-pāda-pāśa(mśa)vaḥ || Svasti[11*] Paramabha-
- 5 trāraka-mahārājādhirāja-paramēśvara - paramamāhēsa(śva)ra - śrīmad - **Vāmadēva** - pād - ānu-
dhyāta⁶⁹ | ⁷⁰-paramabhaṭṭāraka-mahārājādhirāja-paramēśvara-va(pa)-
- 6 ramamāhēśvara-**Trikalīngādhipati**-nija-bhuj-ōpārjīti-āśvapati-gajapati - narapati - rājatray-
ādhipati-śrīmat-**Trailōkyavarmmadēva**-kālyā-
- 7 ṇa-ijaya⁷¹-rājyē | (11) Asty=anēka-guṇa-grāma-dhāma-ta[ru]ṇa-ramaṇa-vibhra[ma-bhra]-
maṇa-janita-śram-ōpaśram-āśram⁷²-āsamābhīrām-[ā*]rāma-rama-
- 8 ṇīyā | vivu(bu)dha dig-vidita-vividha-dhanikajana-dhavalita-bhavana-tulita-gaganamaṇ-
dalā | vāpi-kūpa-taḍag-ōttuṅgadēvatāyatana-prap-ā-
- 9 lōkan-āśvāsita-pāntha-sāntha-viśrama-bhūmiḥ | ghanavana-giri-gaḥvar-ōdara-darī-sarala-
tarala-tāla-tamāla-saṁkulik[ri]ta-si-
- 10 mātā | vividha-veda-dhvani-dhvasta-samasta-kalmashā | **Kakarēdikā** nāma nagarī | (11)
Ētasyāṁ nagaryyāṁ **Kaurava**-vaṁ[śa*]-samudbhūtō aśēsha-⁷³guṇa-
- 11 gaṇ-ālāmṛita-śaīrō dēva-dviḥja-guru-su(śu)śr[ū]sh-ānuraktaḥ | ativa śaktaḥ | Pārva-
tipati-pādapaṁkaj-ārādhan-aikachittaḥ | paramamāhē-
- 12 śvara-mahārāṇaka-śrī-**Dhāhilla**-nām=ābhavat | (11) Tasya putrō vividha-vidyā-vinōda-
rasikaḥ | kāmīnījana-mānasa-rājahamśaḥ
- 13 vidita-jaga[t=k]ṛtḥ | dalit-ārāti-varggaḥ | prakāṣita-saṁgrāma-sau(śau)ryaḥ |
Durjayō nāma vā(rā)jyapālō⁷⁴ babhūva | (11) Asy=ātmajō dōrdaṇḍa-
- 14 chaṁḍim-ārjita-bhūpa-bhūmi-vibhūty-a[dbhu]ta-[vi]jñāna-vilāsō durddhara-ripu-pa(va)na-
dahana-dāvanalo | lalita-yuvatiḥja-ānāṁda-maṁdirah | prauḍha-
- 15 ārag-āva(pa)gā-va[lgz]āvagāhana-vidamvi(mbi)ta-Rēvaṁtaḥ | ⁷⁵ mahārā[ṇa]ka-śrī-**Shōja**-
varmmadēvō dina[kri]d=iv=ābhavat || Ētad-ātmajō nija-vi-
- 16 kram-ākṛānta-bhūnaṁdalah | tu(mu)gdha-ramaṇī-vadan-āraviṁda-makaramda-[ma]dhu-
karcḥ | dīn-ānātha-manōrath-ōddharāṇa-dhuraṁdharah | sadā Śiva-
- 17 pīti-ānuraktaḥ | maharāṇaka-śrī-**Jayavarmma**-nām=āsita(t) || Asya sūnuḥ sakala-kalā-
kva(kā)lita-tatvaḥ⁷⁶ | pratidālita-dripta-ārī-va-
- 18 ggah | pratidīna-dīyamāna-dāna-gīta-kīrttiḥ | Pār[vva]tīramaṇa-charaṇāraviṁda-shat-
padaḥ | mahārāṇaka-śrī-**Vatsarājō** [ba]-
- 19 kāya || Ētat-putrah samābhavat=sajjan-ānāṁda-kārī | vidvajjan-ōpanīta-nītiśāstr-
āchāra-chārī | samūdarya-darp-ōddhata-Kaṁda-
- 20 pa-darp-āpahārī | karatal-ākāṣit-ādhiḥja-ōddamda-kōdamda-chaṁḍim-ākhaṁḍit-ārāti-saṁ-
ghah | kāya-vāk-chitt-ārādhitā-
- 21 sarākara-charaṇa-yugal-āvanamīkṛit-ōttamūṅgaḥ || mahārāṇaka-śrī-**Salashanavarmma**-
dēvō babhūva | (11) Ētasmā[=]jātah sa-
- 22 kṛta-ṇa-nayan-ānāṁda-kārī | dīkṣhakt-ākramaṇ-ōpanīta-tīrth-ārthi-pathika-s[ā*]rtha⁷⁷
vāśīma-śaṁsī | paṇḍita-vṛīṁda-sāna[m]da-pra-

⁶⁷ Motte, Vasantatilakā

⁶⁸ Motte, Vamśastha—The verse is taken from
Bala's *Kāṇḍabharī*, Bo. Ed., page 1, v. 2. In the second
pāda the proper reading is *Du-āsya*, i.e. Ravana not
gachāsya, nor, as the grant D. has it, *ku-āsya*.

⁶⁹ Originally *adhya*.

⁷⁰ Here and in other places below, which it is unneces-
sary to point out separately, the sign of punctuation is
superfluous.

⁷¹ Originally *vijaya*.

⁷² The grant D omits this *āram*; and I believe that
ram-ōpaśram-ōsamābhīrām-ārāma is the right reading

⁷³ Read *śēsha*.

⁷⁴ The grant D also has *vājyapālō*.

⁷⁵ In the grant D the epithet *prauḍha-tarag-āragātha*-
na-vāmanu(mbi)ta-Rēvaṁtaḥ is applied to the chief Kir-
tivarman.

⁷⁶ This is the reading also of the grant D, but as that
grant, below, in reference to another chief, has the
epithet *sakala-kālī-kālita-kālī-arab*, the right reading
here may be *sakala-kālī-kālita-lanub* (not *lāttrah*).

⁷⁷ This word might be read *sartha*; but the grant D
has *sartha*.

- 23 kaṭita-guṇa-grāma-yôgya-dêya-dâyî | sat-pâtr-ôpanîta-nîtisûtra-vyavahâra-karṇṇadhârah |
vidagdha-vanîta-parimalita-
24 vividha-surata-vyâpârah | karpûtra-dhûli-dhavalita-pûgaphala-[pha ॥(?)li]-⁷⁸satat-âpûrita-
vadana-vistârah | samgrām-âṅgaṇa-sambhri(hri ?)ta-Sanmu-
25 kha-⁷⁹darp-ôddhata-vairi-varggah | mahârâṇaka-srî-Harirâjadêvô Harir=iv=âsî ॥ Êtad-
âtmajaḥ sakala-śâstra-śâstra-gîta-pari-
26 jñâta-tat[t*]vaḥ | Parvvataputrikâ-priya-charaṇakamala-samârâdhana-tatparah | gô-hiranya-
dhanya-ratna-bhûmi-dân-ôdaka-

Second plate; first side.

- 27 prakhyâ(kshâ)lita-vâmêtara-kara-prakôsbhah | dôrdḍaṇḍa-chaṇḍimâ(ma)-vikhamḍita-ripu-
munḍa-mamḍali-vimaḍita-Chamḍikâ-charaṇa-yugalah | kâminî-ku-
28 cha-kalasa-kumkum-âmḍita-vakshaḥsthalah | mahârâṇaka-srî[i]-Kumavapaladêvô⁸⁰ vi-
jayi ॥(II) Vadhara-⁸¹pattalâyam | Rêhi-grâma-nivâsina[h] samasta-pra-
29 jâ-lôkân=samâjñapayati vô(bô)dhayati cha | Grâmô=ya[m] mayâ chatur-aghâṭa-viuddha
uttarasyâm disi(śi) Haladuâ sîmâ | pûrvvasyâm disi(śi) Pa[vâ]pa-⁸²
30 palâkasya pippalam⁸³ sîmâ | dakshinasyâm disi(śi) Namdâjhari madhûkas=cha
su(sî)mâ | paschimâyâm disi(śi) Vaḍa[spa]mâ[ga]likâ sîmâ | madhya-grâ-
31 mē ḍimarasiḥāna[uga]m | âmrâś=cha | vâpi madhûkâś=cha | tathâ grâmē
pushkariṇi-chatvârakam | sajalasthala-sâmṣra(mra)-[ma]dhûka-sa-garttôshara-nidhi-
32 sa-lavaṇa-ṭriṇa-pakshi-mi(ni)kshêpadhana-gôcharaparyantah | Maumḍilya-⁸⁴gôtrêbhyaḥ |
Maumḍilya-Âṅgîrasa-Va(bâ)rhaspatya-triḥ⁸⁵pravar[ê]bhyaḥ
33 | yâyu(ju)rvvêdibhyaḥ | vêda-vêdâṅga-pârâgêbhyaḥ brâhmaṇêbhyaḥ | svahâ-svadhi-
dâvapûj-âdi-shatkarmma-nishṭhêbhyaḥ | ṭhakkura-srî-Sêlha-prapautrêbhyaḥ
34 ṭhakkura-srî-Lâhaḍa-pautrêbhyaḥ | râuta-srî-Aṇa[va]pâla-putrêbhyaḥ | râuta-srî-Sâṅgê |
Sûhaḍa | Mahâita | Ramasiha | Sômivî-
35 jhû | râuta-srî-Sâvantaśarmmaṇêbhyaś=cha | saptanavaty-adhikê dvâdasa-sata-
samvatsarê amkê=pi 1297 Kârttikyâ[m] snâtvâ Śiva-
36 sannidhau mâtṛipitrô⁸⁶=âtmanâś=cha puṇya-ṣaśô-vivṛiddhayê sâ(śâ)sanatvê
vra(pra)datta iti ॥(II) Mad⁸⁷-vansa(mśa)jâḥ para-mahîpati-vamśa(śa)jâ yê yê
37 ch=âpi dhârma-nîratâ bhuvî bhâvi-bhûpâḥ | tē pâlavyantu mama dharmam=idam
samastam tēshâm virachitô⁸⁸ mayâ=ñjalir=êsha mûrdḍhni ॥[u*]
38 Yât⁸⁹ yânti mahîbhujâḥ kshitim=imâm bhûyô=pi yâsyanti tē | nô yâtâ na cha
yâti yâsyati kadâ kēn=âpi sârdḍham
39 dharâ | Râmô Dâsa(a)ṛathî Ragh-uttama-k[u*]lê samyâchatê bhûmipân matv=
êdam vasudh-âdhîpâih para-[kṛi]⁹⁰tâ lopyâ na sa[t-kî-]
40 rtayah ॥ Va(ba)hubhîr⁹¹=vasudhâ bhuktâ râjabhiḥ Sagar-âdibhiḥ | yasya yasya
yadâ bhûmis=tasya tasya tadâ phalam ॥ Karttuh⁹²
41 svayam kâravyituh parêṇa chittê[na] tushṭê[na] tath=ânumantuh | sâbâyya-karttuś=cha
śubh-âśubhâni⁹³ tulyam phalam vêda-vidô
42 vadanti ॥ Bhûmim⁹⁴ yah pratigrinhâ(hṇâ)ti yaś=cha bhûmim prayachchhati | ubhau
tau puṇya-karmâtau niyatau svargga-gâminau ॥ Sva-

⁷⁸ The *aksharas* in these brackets appear to have been struck out. ⁷⁹ Read *Sha-mukha* i.e. Kârttikya.

⁸⁰ I believe the name of the chief to have been *Kumavapala* or *Kumâripala*, but the mistake in the most important name of the whole inscription appears extraordinary, especially as the inscription otherwise contains comparatively few mistakes. Va is engraved for va also in *tripitaka*, line 13.

⁸¹ This word might be read *Vararâ*, but D has distinctly *Vadhara*.

⁸² Here and in the following two lines there are several expressions which I am unable to explain. I have enclosed in square brackets every *akshara*, about the reading of which there can be any doubt.

⁸³ Or *pippalava*. According to the Dictionaries, *pippal*, a-a-mase, means 'the holy fig-tree,' and, as a

neut., 'the berry of that tree.' In the present instance, *pippala* or *pippala* is perhaps related to *pippila*, *pippilaka*, *pippilâ*, 'an ant,' and may mean, therefore, 'an ant-hill.'

⁸⁴ This word is, here and in the sequel, particularly clear in the impression, and it is not *Kaumîlyya*. I cannot anywhere find a Maumḍilya *gôtra*. Maugalya we have, e.g., in the *Āvalîyana-sautasûtra* xii. 12. 1.

⁸⁵ Read *tripitaka*.

⁸⁶ Metre, Vasantatilakâ.

⁸⁷ Metre, Sârdulavikrîlita.

⁸⁸ The *akshara* in brackets may be *hri*.

⁸⁹ Metre, Slôka (Anushṭubh). ⁹⁰ Metre, Indravajrâ

⁹¹ The grant D has *subh-âśubhâni*.

⁹² Metre, Slôka (Anushṭubh); and of the next two verses.

- 19 minau || Sva-dattām para-dattām vā yô harēl(ta)=va-sam̐harām | sa vishthâyām.
krimir=bhūtvā pitribhiḥ saha majjati || (āu=ēk[ā*]m (su(su)varṇṇam=ēkam
bhūmēr=apy=ēkam=aṅgulam [1*]
20 haran=navakam=lpnōti m̐(yā)vad-āhūtasamplavam || Vi⁵⁶nāṇī śrī-Kūḥ tathā putra_h*1*
Vijē⁵⁷ kshētra shāmḍī 2 [11*]

**C. — Copper-Plate Grant of the
Mahārāṇaka Kumārapālādēva.⁵⁸**

The (Vikrama) year 1297.

This inscription is on **two plates**, of which the first is inscribed on one side only, and the second on both sides. The first plate measures about $12\frac{1}{2}$ " by $9\frac{1}{2}$ "; and the edges of it are bent up all round into a rim which is from $\frac{3}{8}$ " to $\frac{1}{2}$ " high, so that the second plate, which measures about $12\frac{1}{2}$ " by $9\frac{1}{4}$ " can lie within the protection of this rim. The inscription is well preserved; and almost every letter is perfectly clear in the impression.—There is no **ring-hole** in either of the plates; and no emblem engraved on the plates.—The **weight** of the two plates is $182\frac{3}{4}$ tolas.—The average **size of the letters** on the first plate and in the upper lines of the first side of the second plate is between $\frac{1}{8}$ " and $\frac{1}{4}$ ". Lower down the letters gradually become somewhat larger, and the spaces between the lines widen so that the first side of the second plate holds six line less than the first plate.—The **characters** are Devanāgarī, written by an expert writer. Excepting, I think, the palatal and dental sibilants, the letters are very distinct and hardly to be confounded one with another. The **language** is Sanskrit, and on the whole the script is good. In line 31 we have the unusual word *chaturshataya* at the end of a compound, apparently in the sense of *chaturshataya* 'a collection of'; in lines 31 and 32 the crude forms *saṅg* etc., instead of the customary Nominative *saṅgalasthalah* etc.; in line 35 the Daśarmanābhyaḥ, for *śaṁmanābhyaḥ*; in the wrong compound *mātāpitrīḥ*, regular *mātāpitrīḥ*; and in lines 56 Prākṛit term *visuā*—As regards **orthography** is denoted by the sign for *va* everywhere except in *babhūra*, lines 13, 18 and 21 *brāhmaṇābhyaḥ*, line 33; the dental *s* used instead of the palatal sibilant in (for *māhāśvara*, *māhāśvara*), line 5.

line 11, *saṅg*, line 13, *disi*, lines 29 and 30, *sāśvate* and *vaṁsajāḥ* line 36, and *Dāsarathī*, line 37; and the palatal for the dental sibilant in *prasirāḥ*, line 2. The word *Shatnamakha* is spelt *Satnamakha*, in line 24. The dental *n* is used instead of *anuvāra* in *pāṇśarāḥ*, line 4, and in *vaṁsajāḥ* (for *vaṁśajāḥ*) in line 36. For *mra* we have *mra* in *sāmra*, line 31, *tāmra*, line 46, and *tāmra*, line 48. Other mistakes, such as the occasional use of *kha* for *ksha*, of *va* for *pa* and for *ra*, and of *pa* for *ra*, etc., will be pointed out in the text.

The inscription opens with the words " Ōm. om. success!" which are followed by three verses in honour of Brahman, Purushōttama, (Viṣṇu), and Tryambaka (Śiva), of which the last is taken from the introduction to Bāṇa's *Kālidāsa*. After this, the inscription, in lines 4-7, refers itself to the auspicious reign of victory of the illustrious **Trailōkyavarma-dēva**, to whom the same epithets are applied, which in the inscription B are applied to the prince Vijayadēva, including the statement that he meditated on the feet of the *paramahatthāra maharādādhārāja paramāśvara*, the devout worshipper of Mahāśvara, the illustrious **Vāmadēva**. And the inscription is **dated**, in line 35, on Kārtikī, i.e. the full-moon day of the month Kārtikī, in the year 1297, expressed both in words and in figures, and corresponding, as a year of the Vikrama era, to 1230.

A. Cunningham has already suggested⁵⁹ Trailōkyavarman, here mentioned, as the **Chandōlla** prince of that name, who possess an inscription at Agraya in Vikrama-Samvat 1269 = 1206, and that the lands of the *Manākarēḍī*, between Vikrama-Samvat 1269 and the date of the inscription B, therefore have passed from the

⁵⁸ This *alshra* may have been changed to *alshra*, the meaning of which I do not know, but it is probably the name of the engraver. See the names of the grants A and D.

⁵⁹ I do not know the meaning of this *alshra* which may have reference to the quantity of

mentioned. The name occurs only once, in the name of the engraver, *manākarēḍī*, see note 59.

Chêdi princes into the possession of the Chandêlla rulers. Were it not that, unfortunately, most of the photolithographs of inscriptions in Vol. XXI. of the *Archæol. Survey of India* are somewhat too trying to ordinary eyes, it might be possible to obtain from them some definite information regarding the history of the later Chandêllas and their relation to the Chêdi rulers, for the name of Trailôkyavarman occurs in the inscriptions E., G., and J. from Ajaygarh⁶¹, and other inscriptions make mention of Chêdi and of its capital Tripuri. As it is, I can, for the present, only say that Sir A. Cunningham is very probably right, and draw attention to the singular fact that the titles of the Chêdi princes, including the reference to Vâmadêva, have here been simply transferred to a Chandêlla prince.

The contents of lines 7-28 of our inscription may be given in a very few words. In the town of Kakarêḍikâ (line 10), so we are told, there was once a Mahârâṇaka, named Dhâhilla (line 12), born in the Kaurava vanśa. His son was the ruler Durjaya (line 13); his son, the Mahârâṇaka Shôjavarmanadêva (line 15); his son, the Mahârâṇaka Jayavarman (line 17); his son, the Mahârâṇaka Vatsarâja (line 18); his son, the Mahârâṇaka Salashanavarmanadêva (line 21); his son, the Mahârâṇaka Harirâjadêva (line 25); and his son, the Mahârâṇaka Kumârapâladêva (line 28). The town of Kakarêḍikâ and all these chiefs, devout worshippers of Śiva, have each a string of high-sounding epithets applied to them, which do not furnish any information whatever.

In line 28-36 the chief Kumârapâladêva, who, it may be assumed, owed allegiance to Trailôkyavarman, informs the people concerned that, on the above-mentioned date, he gave the village of Rêhî, in the Vadharâ pattalâ, to the Râutas Sâugē, Sûhaḍa, Mahâita, Ramasiha,

Sômivijhû, and Sâvantaśarman, sons of the Râuta Anavapâla, son's sons of the Thakkura Lâhaḍa, and son's sons of the son of the Thakkura Sêlha, Brâhmanas who followed the Yajurvêda, who were of the Maundilya gētra, and whose three pravaras were Maundilya, Ângirasa, and Bârhaspatya. The village was bounded on the north by Haladuâ, on the east by the pippala (or pipṇalâ) of Pavâpapalâka, on the south by Nandâjhari and madhûka trees, and on the west by Vâdaspamâgalikâ(?); "in the middle of the village (there were)—(?), and mango trees, a pond and madhûka trees; also in the village four lotus-pools." There are several expressions in lines 30 and 31, concerning the boundaries of the village and the objects given together with it, which I do not understand: and I am unable to identify any of the places mentioned.

Lines 36-44 contain the usual admonition to protect the grantees in the possession of their property, and seven benedictory and imprecatory verses. And lines 44-49 add that this tâmraka or copper-plate grant was drawn up (akâri) by the Kâjastha Muktasimha, "by whom the reign of the child-prince was made a prosperous one and his fame spotless"; and that it was written by Mâlâdhara, the son of Śrîpati, grandson of Mahîpati, and great grandson of Sômallâ; engraved by the artisan Ajayasimha and by Pratâpasimha; and acquired by the Râuta Sâvanta.

The second side of the second plate, lines 50-55, contains the name of the six donees, the Râutas Sâvanta, Sâugêka, Sûhaḍaka, Mahâitaka, Ramasihaka, and Vijhûka, as they are called here, each followed by the word *visuḍ* and certain figures, apparently intended to indicate the extent of the proprietary right of each donee in the estate granted to them.⁶²

TEXT.⁶³

First plate.

1 Ôm⁶⁴ ôṃ siddhîḥ || Nirgguṇam⁶⁵ vyâpakam śântam⁶⁶ śivam parama-kâraṇam
bhâva-grâhyam param jyôtiḥ=tasmai sad-Vra(bra)hmanê namaḥ ||

⁶¹ ib. plates xiii, xiv, and xv.

⁶² According to the definition of the term *hasa*, given in Sir H. M. Elliot's *Supplement to Glossary*, Vol. II p. 26, the total of these figures should amount to 20, and this is actually the case in the grant D below. In the present grant, the total of the first figures following upon the word *visuḍ* is only 18; and I conclude therefore that the second figure 2, indicates a subdivision of $\frac{1}{20}$

and that 12 of these minor portions were equal to $\frac{2}{20}$ or $\frac{1}{10}$ of the estate granted.

⁶³ From the impression.

⁶⁴ Expressed by a symbol.

⁶⁵ Metre, Ślôka Anushtubh.

⁶⁶ Instead of *śântam*, the grants B and D have *nityam*.

- 2 Dhyān⁶⁷-aikātān[ā*]-manasô vigata-prasā(sā)rāḥ paśyanti yam kim=api nirmalam=advitīyam | jñān-ātmanê vighaṭit-ākhi-
- 3 la-va(ba)ndhanāya tasmai namô bhagavatê Purushôttamāya || Jayanti⁶⁸ Vā(bā)-nāsura-mauli-lālitāḥ kach-āsya-chûḍāma-
- 4 pi-chakra-chumvi(mbi)naḥ | sur-āsura-ādhīśa-śikhānta-śāyinô bhava-chchhidas=Tryamva(mba)ka-pāda-pāśa(mśa)vaḥ || Svasti[||*] Paramabha-
- 5 ttāraka-mahārājādhirāja-paramêśvara - paramamāhêśa(śva)ra - śrīmad - **Vāmādêva** - pād - ānu-dhyāta⁶⁹ | ⁷⁰paramabhagttāraka-mahārājādhirāja-paramêśvara-va(pa)-
- 6 ramamāhêśvara-**Trikalīṃgādhīpati**-nija-bhuj-ôpārjīti-āśvapati-gajapati - narapati - rājatray-ādhīpati-śrīmat-**Trailōkyavarmmadêva**-kalyā-
- 7 ṇa-vijaya⁷¹-rājyê | (||) Asty=anêka-guṇa-grāma-dhāma-ta[ru]ṇa-ramaṇa-vibhra[ma-bhra]-maṇa-janita-śram-ôpaśram-āśram⁷²-āsamābhīrām-[ā*]rāma-rama-
- 8 mīyā | vivu(bu)dha dig-vidita-vividha-dhanikajana-dhavalita-bhavana-tulita-gaganamamā-dalā | vāpi-kūpa-tadāg-ôttumgādêvatāyatana-prap-ā-
- 9 lōkan-āśvāsita-pāntha-sātha-viśrāma-bhūmih | ghanavana-giri-gaḥvar-ôdara-darī-sarala-tarala-tāla-tamāla-samkulik[ri]ta-si-
- 10 mātā | vividha-vêda-dhvanī-dhvasta-samasta-kalmashā | **Kakarêḍikā** nāma nagarī || (||) Êtasyām naguryyām **Kaurava**-vañ[śa*]-samudbhūtô aśêśha-⁷³guṇa-
- 11 gaṇ-ālamkṛita-śaīrô dēva-dvija-guru-su(śu)śr[ū]sh-ānuraktah | ativa śaktah | Pārva-tipati-pādapamkaj-ārādhan-aikachittah | paramamāhê-
- 12 śvara-mahārāṇaka-śrī-**Dhāhilla**-nām=ābhavat || (||) Tasya putrô vividha-vidyā-vinôda-rasikah | kāmījana-mānasa-rājahamśah
- 13 vidita-iaṅ[ti=k]īrttiḥ | dalit-ārāti-varggah | prakāṭita-saṃgrāma-sau(śau)ryah | **Durjayô** nāma vā(rā)jyapālô⁷⁴ babhūva || (||) Asy=ātmajô dōrdaṇḍa-
- 14 bhāṇḍim-ārjita-bhūpa-bhūmi-vibhūty-a[dbhu]ta-[vi]jñāna-vilāsô durddhara-ripu-pa(va)na-dahana-dāvānalô | lalita-yuvati-ānāmāda-naṃdirah | praudha-
- 15 tanoz-avat(pa)gā-va[gr]āvagāhana-vidānvi(mbi)ta-Rêvañtah | ⁷⁵ mahār[ṇa]ka-śrī-**Shôja-varmmadêvô** dina[kri]d=iv=ābhavat || Êtad-ātmajô nija-vi-
- 16 kram-ākṛānta-bhūnaṃdalah | tu(mu)gdha-ramaṇi-vadan-āravimda-makaramda-[ma]dhu-karah | dīn-ānātha-manôrath-ôddharāṇa-dhuraṃdharah | sadā Śiva-
- 17 vā-ānuraktah | mahārāṇaka-śrī-**Jayavarmma**-nām=āsita(t) || Asya sūnuḥ sakala-kalā-kva(ka)ḥta-tatvah⁷⁶ | pratidāta-dripta-āri-va-
- 18 ggah | pratidāna-dīyamāna-dāna-gita-kīrttiḥ | Pār[vva]tīramaṇa-charaṇāravimda-shat-padaḥ | mahārāṇaka-śrī-**Vatsarājô** [ba]-
- 19 nāva || Êtat-putrah samābhavat=sajjan-ānāmāda-kāri | vidvajjan-ôpanīta-nītiśa-tr-āchāra-chauḥ | saundarya-darp-ôddhata-Kaṇḍa-
- 20 pa-darp-āpahāri | karatal-ākānt-ādhiy-ôddamḍa-kôdamḍa-chamḍim-ākhamḍit-ārāti-saṃghah | kāya-vāk-chitt-ārādhitā-
- 21 Saṅkama-charaṇa-yugal-āvanamrīkṛit-ôttamīṅgah || mahārāṇaka-śrī-**Salashanavarmma-dêvô** babhūva | (||) Êtasmāj=jātah sa-
- 22 kala-jana-nayan-ānāmāda-kāri | dīkchakr-ākramaṇ-ôpanīta-tīrth-ārthi-pathika-s[ā*]rtha⁷⁷ viśrāma-śaṇḍi | paṇḍita-vṛimda-sāna[m]da-pra-

⁶⁷ Metro, Vasantatilakā

⁶⁸ Metro, Vamastha—The verse is taken from *Yāgyavalkya's Kalimbārī*, Bo. Ed., page 1, v. 2. In the second Pāda the proper reading is *Daśīṣya*, i.e. Rāvaṇa, not *Kachīṣya*, nor, as the grant D. has it, *Kivīṣya*.

⁶⁹ Originally *adhīyati*.

⁷⁰ Has, and in other places below, which it is unnecessary to point out separately, the sign of punctuation is superfluous. ⁷¹ Originally *vijaya*.

⁷² The grant D omits this *āśram*; and I believe that *param-ôpa-āsamābhīrām-ārāma* is the right reading

⁷³ Read *śaśha*.

⁷⁴ The grant D also has *vijayapālô*.

⁷⁵ In the grant D the epithet *parama-āchāra-āraṇīka-nāva-vamr(mbi)ta-Rêvañtah* is applied to the chief Kīrtivarman.

⁷⁶ This is the reading also of the grant D, but as that grant, below, in reference to another chief, has the epithet *sakala-kalā-kalā-kalārah*, the right reading here may be *sakala-kalā-kalā-kalārah* (not *-tatrāh*).

⁷⁷ This word might be read *sartha*; but the grant D has *sārtha*.

- 23 kaṭita-guṇa-grāma-yōgya-dēya-dāyī | sat-pātr-ōpanīta-nītisūtra-vyavahāra-karṇṇadhāraḥ |
vidagḍha-vanītā-parimalita-
24 vividha-surata-vyāpāraḥ | karpūra-dhūli-dhavalita-pūgaphala-[pha 11(?)li]-⁷⁸satat-āpūrita-
vadana-vistāraḥ | saṁgrām-āṅgaṇa-sambhri(hri ?)ta-Sānmu-
25 kha-⁷⁹darp-ōddhata-vairi-varggaḥ | mahārāṇaka-srī-Harirājadēvo Harir=iv=āsīt || Êtad-
ātmajaḥ sakala-sāstra-sāstra-gīta-pari-
26 jñāta-tat[t*]vaḥ | Parvataputrikā-priya-charaṇakamala-samârâdhana-tatparaḥ | gô-hiranya-
dhanya-ratna-bhūmi-dân-ôdaka-

Second plate; first side.

- 27 prakhyā(kshā)lita-vāmētara-kara-prakōśbhaḥ | dōrddanḍa-chaṇḍimā(ma)-vikhaṇḍita-ripu-
mumḍa-mamḍali-vimaṇḍita-Chaṇḍikā-charaṇa-yugalaḥ | kāmīni-ku-
28 cha-kalasa-kumkum-āmḍita-vakshaḥsthalah | mahārāṇaka-srī[i]-**Kumavapaladēvo**⁸⁰ vi-
jayi 11(11) **Vadharā**-⁸¹pattalāyām | **Rēhī**-grāma-nivāsina[h] samasta-pra-
29 jā-lōkān=samājūpayati vō(bō)dhayati cha | Grāmō=ya[m] mayā chatur-aghāta-vissuddha
uttarasyām disi(śi) Haladuā sīmā | pūrvvasyām disi(śi) Pa[vā]pa-⁸²
30 palākasya pippalaṁ⁸³ sīmā | dakṣiṇasyām disi(śi) Nāmājhari madhūkas=cha
su(śi)mā | paśchimāyām disi(śi) Vaḍa[spa]mā[ga]likā sīmā | madhya-grā-
31 mē ḍamarasiḥāna[uga?]m | āmrās=cha | vāpi madhūkās=cha | tathā grāmē
pushkariṇi-chatvārakam | sajalasthala-sām̐vra(mva)-[ma]dhūka-sa-garttōshara-nidhi-
32 sa-lavaṇa-ṭriṇa-pakshi-mi(ni)kshēpadhana-gōcharaparyantah | Maumḍilya-⁸⁴gōtrēbhyah |
Maumḍilya-Āṁgirasa-Va(bā)ṛhaspatya-triḥ⁸⁵pravar[ē]bhyah
33 | yāyu(ju)rvvēdibhyah | vēda-vēdāṅga-pāragēbhyō brāhmaṇēbhyah | svahā-svadhā-
dēvapūj-ādi-shatkarma-niṣṭhēbhyah | ṭhakkura-srī-Sēlha-prapautrēbhyah
34 ṭhakkura-srī-Lāhaḍa-pautrēbhyah | rāuta-srī-Āṇa[va]pāla-putrēbhyah | rāuta-srī-Sāmgē |
Sūhaḍa | Mahāita | Ramasiha | Sōmivī-
35 jhū | rāuta-srī-Sāvantaśarmmaṇēbhyas=cha | **saptanavaty-adhikē dvādasa-sata-**
samvatsarē amkē=pi 1297 Kārttikyā[m] snātva Śiva-
36 sannidhan mātripitrōr⁸⁶=ātmanaś=cha puṇya-yaśō-vividdhayē sâ(śâ)sanatvē
vra(pra)datta iti 11(11) Mad⁸⁷-vansa(mśa)jāḥ para-mahīpati-vamśa(śa)jā yē yē
37 ch=āpi dharmā-niratā bhūvi bhāvi-bhūpāḥ | tē pālayantu mama dharmam=idam
samastam tēshām virachitō⁸⁸ mayā=ñjalir=ēsha mūrddhni 11(*)
38 Yāt⁸⁹ yānti mahābhujah kshitim=imām bhūyō=pi yāsyanti tē | nō yātā na cha
yāti yāsyati kadā kēn=āpi sārddhan
39 dharā | Rāmō Dāsa(śa)rathī Ragh-uttama-k[u*]lē samyāchatē bhūmipān matv=
ēdam vasudh-ādhipaiḥ para-[kri]ṇ⁹⁰rā lōpyā na sa[t-kī-]
40 rtayah 11 Va(ba)hubhīr⁹¹=vvasudhā bhuktā rājabhiḥ Sagar-ādibhiḥ | yasya yasya
yadā bhūmis=tasya tasya tadā phalaṁ 11 Kārttuḥ⁹²
41 svayam kārayitūh parēṇa chittē[na] tustitē[na] tath=ānumantūḥ | sâhâyya-karttuś=cha
śubh-āśubhāni⁹³ tulyam phalaṁ vēda-vidō
42 vadanti 11 Bhūmim⁹⁴ yah pratigrinhā(hnā)ti yaś=cha bhūmim prayachchhati | ubhau
tau puṇya-karmānau niyatau svargga-gāminau 11 Sva-

⁷⁸ The *aksharas* in these brackets appear to have been struck out. ⁷⁹ Read *Shā-mukha*, i.e. Kārttikeya.

⁸⁰ I believe the name of the chief to have been *Kumavapala* or *Kumtripala*, but the mistake in the most important name of the whole inscription appears extraordinary especially as the inscription otherwise contains comparatively few mistakes. Va is engraved for va also in *Chandrapāl*, line 13.

⁸¹ This word might be read *Vavarā*, but D has distinctly *Vadharā*.

⁸² Here and in the following two lines there are several expressions which I am unable to explain. I have enclosed in square brackets every *akshara*, about the reading of which there can be any doubt.

⁸³ Or *pippalā*. According to the Dictionaries, *pippalā*, as a mass, means 'the holy fig-tree,' and, as a

neut., 'the berry of that tree.' In the present instance, *pippala* or *pippala* is perhaps related to *pippā*, *pippalā*, *pippilā*, 'an ant,' and may mean, therefore, 'an ant-hill.'

⁸⁴ This word is, here and in the sequel, particularly clear in the impression, and it is not *Kaumilya*. I cannot anywhere find a *Maumḍilya gōtra*. *Maudgalya* we have, e.g., in the *Āśvalāyana-srautasūtra* xii, 12, 1.

⁸⁵ Read *tripra*.

⁸⁶ Metre, *Vasantatilakā*. ⁸⁷ Read *mātṛpitrir*.

⁸⁸ Metre, *Sārdulavikrilita*.

⁸⁹ The *akshara* in brackets may be *hrī*.

⁹⁰ Metre, *Śloka* (Anushtubh). ⁹¹ Metre, *Indravajrā*.

⁹² The grant D has *subh-āśubhānām*.

⁹³ Metre, *Śloka* (Anushtubh); and of the next two verses.

- 43 dattām para-dattām vā yô harêt(ta) vasu[m̐dha]rām | sa vishyâ(śhthâ)yām
krimir=bhûtvâ pitribhiḥ saha majjati || Gām=êkām svarṇam=êkām
44 mu(nu?) bhûmêr=apy=êkam=aṅgulam | haran=narakam=âyāti yâvad-âhûtasamplavam ||
Rājyam⁹⁵ yēna śisôr=akâri nripatêḥ prauḍham ya-
45 sô nirmalam yô vâ dharma-kathâ-ratêr=anudinam viśrâma-bhûmiḥ param(râ) |
kâyasthasya vibhûtayaḥ pratidinam yasy=ârthi-
46 nê nirmitâ[s*?]= tēn=akâri vu(bu)dhēna tām̐vra(mra)kam=idam śrī-
Muktasimhēna vai || Likhitam⁹⁶ Mālādhareṇ=aitan(t)=tām̐vra-(mra)kaṁ pu-
47 nya-varddhanam | sukha-santāna-siddhyartham śubham Śrīpati-sūnunâ || Sômallā-
prapautrēṇa pautrēṇa Ma-
48 hīpatêḥ | putrēṇa Śrīpatêḥ=tām̐vra(mra)m̐ likhitam Mālādhareṇa vai || Utkirṇam
śilpinâ A-
49 jayasimhēna Pratâpasimhēn=âpi || Upârjjitām rāuta-Sāvantēna ||

Second plate; second side.

- 50 Rāuta-Sāvantasya visuâ[5] | 2
51 Rāuta-Sāṅgêkasya visuâ 3 | [2]
52 Rāuta-Sūhaḍakasya visuâ 3 | 2
53 Rāuta-Mahâitakasya visuâ 3 | 2
54 Rāuta-Ramasihakasya visuâ 3 | 2
55 Rāuta-Vijhûkasya visuâ 1 | 2

**D.—Copper-Plate Grant of the
Mahārājaka Harirājadēva.**

The (Vikrama) year 1298.

This inscription, again, is on **two plates**, of which the first is inscribed on one side only, and the second on both sides. The arrangement of the plates is the same as in the case of grant C. The first plate measures about $11\frac{1}{2}$ " by $7\frac{3}{8}$ "; and the edges of it are turned up all round into a rim about $\frac{1}{4}$ " high, within which lies the second plate, measuring about $11\frac{1}{4}$ " by $7\frac{1}{8}$ ". In addition to this, thin strips of copper about $\frac{3}{8}$ " broad are fastened by rivets all round the edges on the front side of the second plate. The inscription is well preserved; and there are only a few letters the actual reading of which is at all doubtful in the impression.—There is a **ring-hole** in the lower part of the first plate; and another in the upper part of the second. But the ring, with any seal that may have been attached to it, is not now forthcoming.—The **weight** of the two plates is $17\frac{1}{2}$ tolas.—The average **size of the letters** is about $\frac{1}{4}$ ". The **characters** are Dēva-nāgarī; and the **language** is Sanskrit. Both the writer and the engraver have done their work carelessly, and the inscription therefore

contains a rather large number of mistakes of grammar and orthography.

As the inscription, down to line 28, in the introductory verses and the epithets applied to the town Kakarêḍikā and to the several chiefs mentioned, and also in the imprecatory verses, from line 36 to line 45, agrees very closely with the inscription C., it would be useless to publish its full text. The extracts which will be given below, contain everything which may be at all important.

Beginning with the words "Om, success" and the same verses in honour of Brahman, Purushōttama, and Tryambaka, which occur at the beginning of the inscription C., followed by the word *śasti*, the inscription refers itself, in lines 4 and 5, to "the reign of victory of the *Mahārāja*, the illustrious **Trailōkyamalla**, endowed with the three kingly titles commencing with *paramabhaddrāraka*⁹⁷ (i.e. *paramabhaddrāraka mahārājādhirāja paramēśvara*)" and the inscription is **dated**, in line 36, "in the month Māgha, the year 1298," expressed by decimal figures only, and corresponding, as a year of the Vikrama era, to A.D. 1240-41. As this date is only one year later than that of the inscription C., I follow Sir A.

⁹⁵ Metre, Śārdūlavikrêḍita.

⁹⁶ Metre, Shloka (Anu-shubh), and of the following metre. Both verses offend against the metre.

⁹⁷ See Mr. Fleet's note in *Journal Bombay Branch Roy. As. Soc.*, Vol. XVI p. 115, and *Archæol. Survey of India*, Vol. XI, plate xxxviii, inscription from the pillar at Bêlkharā.

Cunningham⁹⁸ in regarding the prince **Trailôkyamalla** to be the **Chandëlla Trailôkyavarmadêva** of that inscription.

In lines 5-18, our inscription furnishes the same genealogical list of the *Mahârânakas* of **Kakarêdikâ**, from **Dhâhilla** to **Vatsarâja**, which is contained in the inscription C. From lines 18-29 we learn that Vatsarâja had two sons, the *Mahârânika* **Kîrtivarman**, and the *Mahârânika* **Salashaṇavarmadêva**; and that the latter again had two sons, the *Mahârânika* [V]âha[da] **varmadêva**, and the *Mahârânika* **Harirâjadêva**.

In lines 29-36, the last of these chiefs, **Harirâjadêva**, informs the people concerned that, at the time mentioned, he gave the village of **Agasêyi**, in the **Vadharâ puttulâ** (mentioned also in the inscription C), to the *Râutas* **Sâṅgê**, **Sûhaḍa**, **Mahāditya**, and **Sāmanta**, sons of the *Râuta* **Aṇavê**, and to **Râmasimha**, son of **Kiritû**, son's sons of the *Thakkura* **Lâhaḍa**. Brâhman of the *Maṇḍilya gôtra*, and whose three *pravaras* were *Maṇḍilya*, *Âṅgîrasa*, and *Bârhaspatya*. The estate granted is stated to comprise 20 *visuâ*, of which 2 were given to **Sâṅgê**, 4 to **Sûhaḍa**, 3 to **Mahāditya**, 8 to **Sāmanta**, and 3 to **Râmasimha**. With the exception of **Vijhûka**, who is omitted here, the donees are the persons mentioned as donees in the grant C.

Lines 36-45 contain the same benedictory and imprecatory verses which are given in C, only differently arranged: and lines 45-48 add that this *tâmraka* or copperplate grant was written by the *karâṇika*, or writer of legal documents, the *Thakkura* **Udayasimha**, son of **Tanapasimha**, grandson of **Kamalasimha**, and great grandson of **Sômalla**, born in the family of the *Mahâthakkura* **Dhârêśvara**; and engraved (*unmilitam*) by the son of **Kûkêṁ**, the grandson of the worker in iron (**Gâṅgê**).

The difficulty presented by this inscription is that it purposes to record a grant, made in the [Vikramâ] year 1298 by the chief **Harirâjadêva**, while, from the preceding inscription, it would appear that **Harirâjadêva** already in 1297 had been succeeded by his son **Kumâra-**

pâladêva. If the document D be genuine and its date correctly given, it might possibly be suggested that **Harirâjadêva** was alive in 1297-1298, and had permitted his son, **Kumârapâladêva** to share in the management of his state, or made over to him a portion of his dominions. But such a suggestion could hardly be reconciled with the statement in the grant C, according to which "the reign of the child-prince (**Kumârapâladêva**) was made a prosperous one" by **Muktasimha**, and which appears distinctly to intimate that **Kumârapâladêva** succeeded to the government of **Kakarêdikâ**, while he was still a child.

The inscriptions C and D furnish the following genealogical list of the *Mahârânakas* of **Kakarêdi**:

1. **Dhâhilla.**
2. **Durjaya.**
3. **Shôjavarman.**
4. **Jayavarman.**
5. **Vatsarâja.**
6. **Kîrtivarman.**
7. **Salashaṇavarman.**
8. [V]âha[da]varman.
9. **Harirâja.**
[Vikrama S 1298.]
10. **Kumârapâla.**
[Vikrama S. 1297.]

Of these, 4, 5, and 6 are mentioned also in the inscription A., with the date [Chêdi-] **Saṁvat** 926 = A.D. 1175 for 6, **Kîrtivarman**.—And the inscription B. has the names 1, and 4—7, (with the date [Vikrama-] **Saṁvat** 1253 = A.D. 1195 for 7, **Salashaṇavarman**, or **Salakhaṇavarman**, or **Salakshaṇavarman**), while, in the place of 2 and 3, it has the three names **Vâjûka**, **Dandûka**, and **Khôjûka**. Of these, I feel no hesitation in identifying **Khôjûka** with 3, **Shôjavarman**, and I think it probable that **Vâjûka** and **Dandûka** were two brothers, of whom one was also named **Durjaya**.

EXTRACTS FROM THE TEXT.⁹⁹

First plate.

1 Ôṁ siddhih ||¹⁰⁰
4 || Svasi(sti) || Paramabhaṭṭarak-êtyâdi-râ-

⁹⁸ *Archæol. Survey of India*, Vol. XXI p. 148.

⁹⁹ From the impression.

¹⁰⁰ Here follow the same three verses in honour of

Brahman, **Vishnu**, and **Śiva**, which are contained in the grant C.

- 5 j[â*]vali-tray-ôpêta-mâ(ma)hârâ[sâ(ja)]-śrī-Trêlâkyamalla¹⁰¹-vijaya-râjyê || As[t*]y= . . .
 9 Kakarêḍika nâma nagari || Ê-
 10 tasyâm nagaryâm Kaurava-vamsa(sa)-samudbhûtô
 11 mahârâṇaka-śrī-Dhâhilla-nâ-
 12 m=âbhavata(t) || Tasya putrô
 13 . . . Durjjayô nâma vâ(râ)jyapâlô babhûva || Nra(A)sy=âtma-jô
 14 mahârâṇaka-śrī-[Shô]javarmmadêvô¹⁰² bhavat || Ê
 15 tad-âtma-jô
 16 . . . mahârâṇaka-śrī-Jayavarmma-nâm=âsît || Asya sūnuḥ
 18 . . . mahârâṇaka-śrī-Vatsarâjô babhûva || Êtasya putraḥ

Second plate; first side.

- 20 mahârâṇaka-śrī-Kirttivarmma-nâm=âbhavat || Sa(A)sya bhrâtâ
 23 . . mahârâṇaka-śrī-Salashaṇavarmmadêvô babhûva || Asya sūnuḥ
 24 mahârâṇaka-śrī-[V]âha[ḍa]¹⁰² varmmadêvaḥ samjâtaḥ || Mû(A)sya bhrâ-
 25 tâ
 28 ma-
 29 hârâṇaka-śrī-[Har]¹⁰³irâjadêvô vijayî || Vadharâ¹⁰⁴pattalâyâm | Agasêyi-grâmâ(ma)-
 nivâsinah pra-
 30 jâ-lôkân=anyâms=cha samâjñâpayanti(ti) vô(bô)dhayanti(ti) cha || Grâmô=yamm=¹⁰⁵
 asmâbhi=chavu(tu)râghâta-visu(śu)ddha[h*] sajala-
 31 [sthala]-sâ[mvra(mra)]madhûka-sagarttôshapa(ra)-nidhimi(ni)kshêp-âkâ[s]ôtpatti-sa(kha)-
 ni-mô(gô)charaparyantah | Mai(mau)mḍilya-gô[tr]êbhyah
 32 [M]aumḍilya- | Ângirasa- | Vârahasatya¹⁰⁶-tripravarêbhyah | ſha¹⁰⁷ | Lâhaḍa-pautrê-
 bhyah 1 râ¹⁰⁸ | Mû(A)navê-putrêbhyah[h*]
 33 râ | Sâmgê vi¹⁰⁹ 2 râ | Sûhaḍa vi [4] râ | Mahâditya vi 3 râ | Sâmantâ vi 8
 râ | Kiritû-putra-Râ-
 34 [ma?]simha vi 3 [sar]vam vi 20

Second plate; second side.

- 35 [êbhy]ô vrâ(brâ)hmaṇêbhyô grâmô=yam sâ(sâ)sanatvê pradattêti¹¹⁰ matvâ bhâga-
 bhôga-kara-pravânêkar¹¹¹-âdikam sarvvaṁ dâta-
 36 vyam=iti | Samvata(t) 1298¹¹² Maghê māsî snâ[t*]vâ Śivam prapûjya pradattam=
 itti(ti) || Bhavanti ch=âtra puṇya-slôkâḥ ||¹¹³
 45 Śrîmat-karaṇika-varêṇa
 46 mahâthakkura-śrī-[Dhâ]rêsvâr-ânvay-ôdbhavêṇna(na) thakkura-śrī-Sômalla-prapautr[ê*]ṇa
 thakkura-śrī-Kamalasinha(mha)-
 47 pautrêṇa thakkura-śrī-Tanapa(?)simhasya putrêṇa thakkura-śrī-Udayasimhêṇa tâmrakam=
 idam=al[êkh]i ||
 48 Ayaskâra-Gâmg'-pautrêṇa Kûkêṁ-putrêṇ=ônmlitam=iti ||

FOLKLORE IN SOUTHERN INDIA.

BY S. M. NATESA SASTRI.

No. XXV.—(Concluded from p. 205.)

Thus thinking, the eight thieves ranged themselves at the side of the four legs of the cot, and, without the slightest shaking, removed

the cot with the sleeper on it outside the town. Their joy in thus having brought away their enemy was very great, and, not fearing for the

¹⁰¹ Read *Trailôkyamalla*.

¹⁰² The letters in brackets are doubtful.

¹⁰³ I believe, the letters here put in brackets are quite certain. The epithets applied to the chief are almost entirely the same as those applied to Harirâjadêva in the grant C.

¹⁰⁴ In the grant C this word might be read *Vavarâ*.

¹⁰⁵ Read *yam*.

¹⁰⁶ i.e. *thakkura*.

¹⁰⁷ Read *Bârhaspatya*.

¹⁰⁸ i.e. *râta*.

¹⁰⁹ i.e. *visu*.

¹¹⁰ Read *pradatta iti*.
¹¹¹ Read *pravânêkar*-, and compare *ante* Vol. XV. p. 10, note 58.

¹¹² The last figure appears to be undoubtedly 8, as it was read by Sir A. Cunningham; but the figure 8 is differently formed above, in line 33.

¹¹³ Here follow the same benedictory and imprecatory verses, which are found in the grant C, but differently arranged.

safe custody of their prisoner, they marched to their cave. Meanwhile Chandralêkhâ was not idle on the cot. The way to the jungle was through a long and fine avenue of mango trees. It was the mango season, and all the branches were hanging with bunches of ripe and unripe fruit. To make up for her weight on the cot she kept plucking mango bunches and heaping them on it, and as soon as a quantity which she thought would make up her weight was upon the cot, she without the slightest noise took hold of a branch and lifted herself up from off it. The thieves walked on as before, the weight on their heads not apparently diminishing, leaving our heroine safely seated on a mango branch to pass the few remaining *ghatikâs* of that anxious night there. The thieves reached their cave just at daybreak, and when they placed their burden down their eyes met only bunches of ripe mangoes, and not the lady they looked for. "Is she a woman of flesh and blood or is she a devil?" asked the chief of the next in rank.

"My lord! She is a woman fast enough, and if we search in the wood we shall find her," replied he, and at once all the eight robbers after a light breakfast began to search for her.

Meanwhile the morning dawned upon Chandralêkhâ and let her see that she was in the midst of a thick jungle. She feared to escape in the daytime as the way was long, and she was sure that the robbers would soon be after her. So she resolved to conceal herself in some deep ambush and wait for the night. Before she left the cot for the mango branch she had secured in her hip the small knife she had made for herself out of the robbers' rod and the purse containing the materials for chewing betel; and near the tree into which she had climbed she saw a deep hollow surrounded by impenetrable reeds on all sides. So she slowly let herself down from the tree into this hollow, and anxiously waited there for the night.

All this time the eight thieves were searching for her in different places, and one of them came to the spot where Chandralêkhâ had sat in the tree, and the dense bushes near made him suspect that she was hidden there; so he proceeded to examine the place by climbing up the tree. When Chandralêkhâ saw the thief on the tree she gave up all hopes of life. But suddenly a bright

thought came into her mind, just as the man up above saw her. Putting on a most cheerful countenance she slowly spoke to him: "My dear husband, for I must term you so from this moment, since God has elevated you now to that position, do not raise an alarm. Come down here gently, that we may be happy in each other's company. You are my husband and I am your wife from this moment."

So spoke the clever Chandralêkhâ, and the head of the thief began to turn with joy when he heard so sweet a speech, and, forgetting all of her previous conduct to himself and his brethren, he leapt into the hollow. She welcomed him with a smiling face, in which the eager heart of the robber read sincere affection, and gave him some betel-nut to chew and chewed some herself merrily. Now redness of the tongue after chewing betel is always an indication of the mutual affection of a husband and wife among the illiterate of Hindû society. So while the betel-leaf was being chewed she put out her tongue to show the thief how red it was, letting him see thereby how deeply she loved him; and he, to show in return how deeply he loved her, put out his tongue too. And she, as if examining it closely, clutched it in her left hand, while with her right hand in the twinkling of an eye **cut off the tongue and nose of the robber**, and taking advantage of the confusion that came over him she cut his throat and left him dead.

By this time evening was fast approaching, and the other seven robbers, after fruitless search, returned to their cave, feeling sure that the eighth man must have discovered Chandralêkhâ. They waited and waited the whole night, but no one returned, for how could a man who had been killed come back?

Our heroine, meanwhile, as soon as evening set in, started homewards, being emboldened by the occasion and the circumstances in which she was placed. She reached home safely at midnight and related all her adventures to her mother. Overcome by exhaustion she slept the rest of the night, and as soon as morning dawned began to strengthen the walls of her bedroom by iron plates. To her most useful pocket-knife she now added a **bagful of powdered chillies**, and went to bed, not to sleep, but to watch for the robbers. Just as she expected, a small hole was bored in the east wall of her

bedroom, and one of the seven robbers thrust in his head. As soon as she saw the hole our heroine stood by the side of it with the powder and knife, and with the latter she cut off the nose of the man who peeped in and thrust the powder into the wound. Unable to bear the burning pain he dragged himself back, uttering "ñt, ñt, ñt, ñt," having now no nose to pronounce properly with. A second thief, abusing the former for having lost his nose so carelessly, went in, and the bold lady inside dealt in the same way with his nose, and he too, dragged himself back in the same way, calling out "ñt, ñt, ñt, ñt." A third thief abused the second in his turn, and going in lost his nose also. Thus all the **seven thieves lost their noses**, and, fearing to be discovered if they remained, ran off to the forest, where they had to take a few days' rest from their plundering habits to cure their mutilated noses.

Chandralêkhâ had thus three or four times disappointed the thieves. The more she disappointed them the more she feared for her own safety, especially as she had now inflicted a lifelong shame on them. "The thieves will surely come as soon as their noses are cured and kill me in some way or other. I am, after all, only a girl," she thought to herself. So she went at once to the palace and reported all her adventures with the eight robbers to **the prince**, who had been her former class-mate. The prince was astonished at the bravery of Chandralêkhâ and promised the next time the robbers came to lend her his assistance. So every night a spy from the palace slept in Chandralêkhâ's house to carry the news of the arrival of the robbers to the prince should they ever go there. But the robbers were terribly afraid of approaching Chandralêkhâ's house after they came to know that she had a knife made out of the boring-rod. But they devised among themselves **a plan of inviting Chandralêkhâ to the forest** on the pretence of holding a *nâch* and sent to her house a servant for that purpose. The servant came, and, entering Chandralêkhâ's house, spoke thus to her: "My dear young lady, whoever you may be, you have now a chance of enriching yourself. I see plainly from the situation of your house that you are one of the dancing-girls' caste. My masters in the forest have made a plan to give a *nâch* to their relatives on the occasion of a

wedding which is to take place there the day after to-morrow. If you come there they will reward you with a *karôr* of *mohars* for every *nimishâ* (minute) of your performance." Thus spoke the servant, and Chandralêkhâ, knowing that the mission was from the thieves, agreed to perform *nâch*, and, asking the man to come and take her and her party the next morning to the forest, sent him away.

In order to lose no time she went at once to the prince and told him all about the *nâch*. Said she, "I know very well that this is a scheme of the thieves to kill me, but before they can do that we must try to kill them. A way suggests itself to me in this wise. To make up a *nâch* girls' party more than seven persons are required. One must play the drum; a second must sound the cymbals; a third must blow upon the *nâgasvara* pipe, etc., etc. So I request you to give me seven of your strongest men to accompany me disguised as men of my party, and some of your troops must secretly lie in ambush in readiness to take the robbers' prisoners **when a signal is given to them**."

Thus Chandralêkhâ spoke, and all her advice the prince received with great admiration. He himself offered to follow her as her drummer for the *nâch*, and he chose six of the ablest commanders from his army, and asked them to disguise themselves as fiddlers, pipers, etc. and he directed an army of a thousand men to follow their footsteps at a distance of two *ghatikâs* march, and to lie in ambush near the place where they were going to perform the *nâch*, ready for a call. Thus everything was arranged and all were ready by the morning to start from Chandralêkhâ's house.

Before the third *ghatikâ* of the morning was over, the robbers' servant came to conduct Chandralêkhâ with her party to the forest where the prince and six of his strongest men disguised as her followers, were waiting for him. Chandralêkhâ with all her followers accompanied him, but as soon as she left her house a spy ran off to the army, which, as ordered by the prince, began to follow her party at a distance of two *ghatikâs*.

After travelling a long way Chandralêkhâ and her party reached the *nâch* pavilion at about five *ghatikâs* before sunset. All their hosts were without their noses, and some still had their noses bandaged up. When they saw

that Chandralêkhâ's followers had a fine and prepossessing appearance, even the hard hearts of the robbers softened a little.

"Let us have a look at her performance. She is now entirely in our possession. Instead of murdering her now, we will witness her performance for a *ghatikâ*," said the robbers to each other; and all with one voice said "agreed," and at once the order for the performance was given.

Chandralêkhâ, who was clever in every department of knowledge, began her performance, and by the most exquisite movement of her limbs held the audience spell-bound, when suddenly *tâ tai, tûm* clashed the cymbals. This was the signal for the destruction of the robbers, as well as the sign of the close of a part of the *nâch*. In the twinkling of an eye the seven disguised followers of the dancing-girl had thrown down the thieves and were upon them. Before the servants of the robbers could come to the help

of their masters the footsteps of an army near were heard, and in no time the prince's one thousand men were on the spot and took all the robbers and their followers prisoners.

So great had been the ravages of these robbers in and round Kaivalyam that, without any mercy being shown to them, they and their followers were all ordered to be beheaded, and the prince was so much won over by the excellent qualities of Chandralêkhâ that, notwithstanding her birth as a dancing girl, he regarded her a gem of womankind and married her.

"Buy a girl in a *bûdûr*" (*kannigai kadaijin kol*) is a proverb. What matter where a girl is born provided she is chaste! And Chandralêkhâ by her excellent virtue won a prince for her lord. And when that lord came to know of the real nature of his teacher, who was also the teacher of Chandralêkhâ, he banished him from his kingdom as a merciful punishment, in consideration of his previous services.

CORRESPONDENCE.

AN ORIGIN FOR THE WORD "GIPSY."

SIR.—Numerous derivations of this word have been suggested from time to time: some very far-fetched.

In Appendix A to Vol. XIII., Part II. *Bombay Gazetteer*, p. 711 Mr. James M. Campbell has given an able summary of nearly all the then available information regarding the origin of the Gipsies, and his notes will serve as a valuable index for those who wish to study the subject minutely. But he, as well as other writers, appears to have overlooked one origin of the name Gipsy, which, if well-founded, is far more probable than any other which has yet been published. The derivation I refer to is contained in the following paragraph, which I quote from the *Transactions* of the Bombay Geographical Society, Vol. VI. page 89:—

"The origin of the Gypsies of Europe has been ascribed, with different degrees of probability, by various persons, to Egypt, India and the Western Coast of the Red Sea; but it appears to have been overlooked that the Amharic name for Egypt is still Giptz, and for the natives of that country Giptzi. The same people (the Gypsies) are called Zingaro, or Zingano, by the Italians. The Persians apply the term Zangi to all the natives of the north-east portion of Africa, including the Abyssinians; thus, it is not surprising that these people emigrated from the Abyssinian Coast, acquired the name Gypsy or Giptzi from having entered Europe through Egypt, and that they were called Zingano by the Italians, and people of the adjacent countries, from the Persian name Zangi, an Ethiopian, an inhabitant of North-Eastern Africa." J. S. KING.

MISCELLANEA.

CALCULATIONS OF HINDU DATES

No. 13.

In the Mudyanûr copper-plate grant of the Bapa king Srivadhûvallabha-Malladêva-Nandivarman, from the Kôlâr District in

¹ Remarks on the North-East Coast of Africa, and the various Tribes inhabiting it, &c. &c. By Lieut. C. P. Rigby, 16th Regt. Bn. N. I., March 1863.

² I have not my ink-impressions at hand to refer to

Maisûr, published by Mr. Rice in this Journal, Vol. XV. p. 172ff., the date line 23rd from the published text runs—*eka-shashity-uttara-dvaya-satê Śakâbada pravardhhamân-âmanâ trayô, vimsatî³ varatamâna-Vibhâbi-samyak Kârttik*.

But I satisfy myself if at the time that there is at least no substantial error in the published reading.

³ Read *ekavimsatî* for *Sâkâbâd* for *pravarâdhmânâ* and *âmanâ* for *âmanâ*.

śukla-pakṣhe trayōdaśyāṁ Sôma-varê Aśvinîyām¹ nakṣatrê,—in the Śaka year two hundred, increased by sixty-one, in his own augmenting twenty-third-year, in the Vilāmbin samva'sara, which is current; in the dark fortnight of Kārttika; on the thirteenth *tithi*, on Monday; under the Aśvinî nakṣatra.

This gives us, for calculation, Śaka-Samvat 261, current according to the literal meaning of the text, the Vilāmbin samvatsara of the Sixty-Year Cycle of Jupiter, the month Kārttika (ordinarily October-November; the dark fortnight: the thirteenth *tithi* or lunar day; Sôma-vara, or Monday), and the Aśvinî nakṣatra.²

As, however, some objection may be taken to the use of *śukla* to designate the dark fortnight, and it may be urged that we should correct *Kārttika-śukla* into *Kārttika-śukla*, the calculation will be the same also for the same *tithi* in the bright fortnight. And the *tithi* in the dark fortnight will be calculated according to both the *Pārcimānta* and the *Amānta* arrangements.

By the Southern System of the Sixty-Year Cycle, the Vilāmbin samvatsara was coincident with Śaka-Samvat 261 current (A.D. 338-39; or as shown in the Tables, 260 expired. And for this year, with the basis of Śaka-Samvat 260 expired, the results, by Prof. K. L. Chhatre's Tables, are—(1) the *Pārcimānta* Kārttika kṛṣṇa 13 ended on Thursday, the 28th September, A.D. 338, at about 21 *ghaṭī*, 11 *palas*, after mean sunrise at Bombay;—(2) Kārttika śukla 13 ended on Friday, the 13th October, at about 13 *ghaṭī*, 42 *p*;—and (3) the *Amānta* Kārttika kṛṣṇa 13 ended on Friday, the 27th October, at about 15 *ghaṭī*, 28 *p*.

If it should be argued that the given year Śaka-Samvat 261 was to be taken as the expired year, in which case the given date belongs to Śaka-Samvat 262 current (A.D. 339-40), and the name of the month *śarvāra* might be dropped from Vilāmbin into Vikārin, the results are—(1) the *Pārcimānta* Kārttika kṛṣṇa 13 ended on Wednesday, the 17th October, A.D. 339, at about 20 *ghaṭī*, 56 *p*;—(2) Kārttika śukla 13 ended on Wednesday, the 18th October, at about 19 *ghaṭī*, 43 *p*;—and (3) the *Amānta* Kārttika kṛṣṇa 13 ended on Thursday, the 21st November, at about 52 *ghaṭī*, 19 *p*. These results, however, coincide with the statement in the Tables that the year 262 current, the month Aśvin, is an intercalary, before Kārttika. On this point, in that, according to any method of calculation, the interval of time was in some months after Kārttika, the result is the same. (1) the *Pārcimānta* Kārttika kṛṣṇa

13 ended on Tuesday, the 2nd October, A.D. 339, at about 14 *ghaṭī*, 29 *p*;—(2) Kārttika śukla 13 ended on Tuesday, the 18th September, at about 1 *ghaṭī*, 38 *p*, and consequently with the possibility that calculations by the Siddhāntas themselves might make it end on the preceding day, Monday;—and (3) the *Amānta* Kārttika kṛṣṇa 13 ended on Wednesday, the 17th October, at about 26 *ghaṭī*, 56 *p*, being of course identical with the *Pārcimānta* Kārttika kṛṣṇa 13 of the previous calculation.

If it should be argued that we should take the Vilāmbin samvatsara of the Northern System, it was current, by the Tables, at the commencement of Śaka-Samvat 267 current (A.D. 344-45), and, by Mr. Sh. B. Dikshat's Tables, I find that it actually commenced in Śaka-Samvat 266 current, on Tuesday, the 1st November, A.D. 343, and it was followed, in Śaka-Samvat 267 current, by the Vikārin *śarvāra*, which commenced on Saturday, the 27th October, A.D. 344. The day on which the Vilāmbin samvatsara commenced, actually was the *Amānta* Kārttika kṛṣṇa 13 of Śaka-Samvat 266 current; the *tithi* ending at about 52 *ghaṭī*, 51 *p*. This therefore, as the week-day was a Tuesday, disposes of another possible equivalent of the given date. But, in addition to this, the day on which the Vikārin *śarvāra* commenced was, approximately, Mārgaśīrṣa śukla 4 of Śaka-Samvat 267 current. Consequently the Vilāmbin samvatsara included, at its end, the whole month of Kārttika, both *Pārcimānta* and *Amānta*, of Śaka-Samvat 267 current. And the results, here, with the basis of 266 expired, are—(1) the *Pārcimānta* Kārttika kṛṣṇa 13 ended on Friday, the 21st September, A.D. 341, at about 13 *ghaṭī*, 26 *p*;—(2) Kārttika śukla 13 ended on Saturday, the 6th October, at about 11 *ghaṭī*, 12 *p*;—and (3) the *Amānta* Kārttika kṛṣṇa 13 ended on Saturday, the 20th October, at about 53 *ghaṭī*, 36 *p*.

Thus, in no way whatever can the result of Monday, in accordance with the record, be obtained directly from the Tables. And there is only a possibility of a Monday in one instance, in which, to obtain it, we must deliberately and unjustifiably, alter the name of the given samvatsara from Vilāmbin into Vikārin.

These results, therefore, furnish the strongest possible corroboration of the opinion already expressed by me, that this grant is a spurious grant. Also, since the record evidently intends the Vilāmbin samvatsara of the Southern System, and since I have already shown, under No. 9 of,

¹ As the record belongs to Mārgaśīrṣa, in necessity, the ending time of the *tithi* be earlier than the time for Bombay.

² Vol. XV, p. 192, note 1.

³ The basis of the computation of which I must not be understood should be the night which after the day is possible.

'Ali, and under "Gulshan" repeats this statement, its author adding that he knew Gulshan personally in Shiráz. The family apparently belonged to the Zankenh tribe of Kermānshāh, the poet himself being born at Shiráz. Fath 'Alī Shāh, appreciating his talents, gave him the title of Mujtehed-ush-Shu'arā, which title was changed by Fath 'Alī Shāh's successor to that of Hiss-an-ul-'Ajem. Qāānī died in A.H. 1270, leaving an imitation of the *Galistān* of Sa'dī called *Perishān* پریشان, in which he states that it was composed in A.H. 1252, when he was a few months short of 30 years of age. This work has been lithographed separately at Tehrān, illustrated, A.H. 1271. The poet's complete poetical works, with the *Perishān* have been lithographed at Tehrān 1274, 1277, 1293 and 1302. The complete works have been lithographed at Tabriz 1273, Bombay 1273, 1277 and 1298. The biographical notice from the *Ganj Shāygan* is included in most of these editions. Biographical notices of the poet will also be found in the *Nigristān Sukhan*, p. 81, and in the *Madhiyih Mu'tamediyeh*.

Included in most lithographed editions of the works of Qāānī is a collection of *ghazels*, by Mirzā 'Abbās bin Āqā Musā Bostāmi, preceded by a notice of this poet, whose *takhallus* was Frūghī.

Originally the poet called himself Maskin, but finding a patron in the Shujā'uddaulah, Husain 'Alī Mirzā, by desire of that prince he adopted the *nom de plume* of Frūghī, after the title of the prince's son, who was styled Frūgh-uddaulah. Frūghī Bostāmi, who is not to be mistaken for his distinguished contemporary Frūghī Isfahānī, was born at Kerbelā in A.H. 1213 and died in A.H. 1274. His father, a courtier of the cruel founder of the Qājār dynasty—Āqā Muḥammed Khān—was elder brother of Fath 'Alī Shāh's treasurer, Dūst 'Alī Khān, Moayer-ul-Mamālek.

Besides the above, the lithographed *Kulliyāt* of Qāānī has also, bound up with it, some selections from the poems of one of Qāānī's patrons, Jelāl-ud-dīn Mirzā, poetically styled Jelāl, and author of the epitome of Persian history, called *Nāmeḥ Khosravān*, lithographed at Tehrān, illustrated, in 3 vols., A.H. 1285-88, and also in Vienna. The publication of the *divāns* of Qāānī and Frūghī is due to this prince, and the edition of 1274 is known by his name.

Prefixed to Mulla Mahmūd Khwānsārī's edition of Qāānī's works—dated Tehrān 1302—will be found the *Treatise on Prosody* called حدائق السحر *Hadāiq-us-Siḥr* of Rashid Vatvat.²

A. S. J. C.

BOOK NOTICE.

THE FIRST ANNIVERSARY OF THE MADRAS GIRLS' MUSIC SCHOOLS FOR YEAR 1887. Madras: Addison and Co. 1888.

This unpretending little pamphlet gives the brief history of a new and most interesting experiment now being tried in Madras.

Mr. T. M. Venkatesa Sastri, a devoted student of music, desirous of instructing the female youth of his native city in the art, being moreover urged thereto by friends and acquaintances, opened last year three schools for music for girls in Madras, all conducted on a small scale. But he was met at the outset with a peculiar prejudice.—The people of Madapur (the locality of the largest school) did not approve of their daughters being taught music. However he persevered, and by the end of the year had 53 pupils in his schools.

The music apparently taught is not described, but it seems to have been mainly vocal, the parents insisting on their children learning only "religious and moral compositions." The dread of their becoming as dancing-girls if taught anything else, seems to peep out here. Small beginnings have, however, been made towards teaching

instrumental music, especially playing on the *violin*.

It is moreover extremely gratifying to learn that, owing to the absence of books from which to teach his girls, the enthusiastic founder of these schools intends publishing **primers** and **progressive works in Hindu music**, and that he has almost completed a graduated series of **textbooks**.

It is to be hoped that this new departure in domestic education will not prove to be what is so expressively called in Hindustān *shakhsā kām*, and die when its chief promoter can no longer guide it. But there can be no doubt that it is not yet out of its difficulties; for the accounts show that the expenditure was Rs. 339, out of which the founder gave Rs. 265; only Rs. 74 being received as fees, and *nothing* from his friends and sympathisers. Schools cannot live long on this principle.

In addition to his money Mr. Venkatesa Sastri has given his time very freely. And we give his experiment our heartiest greeting and our best wishes; for not only will his teaching improve the girls fortunate enough to come under it, but it also, as hinted above, distinctly makes for domestic morality.

² See ante Vol. XVI. p. 362.

ALBERUNI'S STATEMENT REGARDING THE GUPTA ERA.

BY J. F. FLEET, C.I.E., B.O.C.S., M.R.A.S.

THE chief difficulty in arriving at a final settlement of the true period to which we should refer the rise and duration of the Early Gupta power, was, that, according to M. Reinaud's translation of Albêrûni's statements (see *ante*, Vol. XV. page 189), the establishment of the so-called Gupta era commemorated the extermination of the Gupta dynasty.

As Albêrûni's further statements shewed that the era,—the commencement of which is now known to have been in A.D. 320.—evidently dated from a point in or very close to A.D. 319, this translation seemed to fix that point of time for the termination of the Early Gupta sovereignty. And this is the view that was adopted by one class of students of the subject.

This rendering of the leading historical item, however, from the first attracted special attention; because of the *prima-facie* improbability of the fact that an era, specially named after a certain dynasty, should date from the downfall of that dynasty. And, from time to time, various attempts were made to find an explanation for it: and with very conflicting results.

That the true solution was to be found, not in wrong information given to Albêrûni or in a mistake made by him in reporting correct information, but in an erroneous interpretation of his meaning, was first indicated to me by Mr. Rehatsek, who, in December, 1886, gave me, from M. Reinaud's published text, the following literal rendering of the crucial passage:—"and (*as regards*) the Gupta era, it was, as is said, a nation wicked (*and*) strong: and when they perished, dating was made according to them."¹ Such a rendering as this, would enable us to give to Albêrûni's words a

meaning perfectly clear and consistent with the usual order of things: *viz.* that the Guptas, though wicked and inferentially unpopular, yet had exercised so powerful a sway that, even when their dynasty came to an end, the era, that had been used by them, still continued to be used.

So also, somewhat later, Mr. H. C. Kay, translating the words by "dating was made by (or, according to) them," added the following remarks on the interpretation of them:—"The author's meaning is not clear. But, taking the words as they stand, I think they can most consistently be understood as signifying an adoption or continuation of the method of dating that had been used by the Guptas. The preceding words 'when they came to an end' suggest the possible meaning that the dating ran from that event. But it seems to me that this construction can be properly preferred, only if there be something else in the context, or in the known facts of the case, that would make it obligatory; or, at least, that clearly points to it."

The essential error in M. Reinaud's translation,—the era which bears their name, is the epoch of their extermination,—is due to the introduction of the word 'epoch,' which does not exist in the original text, and the use of which gives his translation a fixed obligatory meaning that, at any rate, a literal rendering of the original does not compel us to adopt.

And, in proof of this, I am glad to be able to publish the following transliteration, with interlinear word-for-word rendering and translation, which Prof. William Wright, of Cambridge, has been kind enough to give me, from Prof. Sachau's published text, of the original of the whole passage in question:—

TEXT AND LITERAL RENDERING.

| | | | | |
|-----------------|-----------------------|--------------------|---------------|---------------|
| { Wa-li-dhâlika | 'aradû | 'an-hâ | wa-jâ'û | ilâ |
| { And for this | they have turned away | from them | and have come | to |
| { tawârîkh | Shrî-Hrîsh | wa-Bigarmâdita | wa-Shaka | wa-Bilaba |
| { the eras of | [Sri-Harsha] | and [Vikramâditya] | and [Saka] | and [Valabhî] |

¹ Similarly, some thirteen years ago, Mr. Blochmann (see the *Jour. Beng. As. Soc.* Vol. XLIII. Part I. page 338) proposed to translate—"as regards the Gupta-kal, they were, as is related, a people wicked and powerful, and when they were cut off it was dated in them (the era commenced?)."—This translation, however, is spoilt by

the bracketed words "the era commenced?"; the use of which shows why Mr. Blochmann, though giving a translation capable of a totally different meaning, expressed himself as not able to see any fault in M. Reinaud's translation.

| | | | | | | |
|--|-------------------------------|--|---|----------------------------------|--|--------------------|
| { wa-Kūbita. { and [Gupta]. | ..... | Wa-ammā | ta'rikh | Balba | | |
| | | And as regards | the era of | [Valabhi] | | |
| { wa-huwa { and he | ṣāhib lord of | madīnat the city of | Balbah [Valabhi] | wa-hiya and it | janūbiyah south | 'an from |
| { madīnat { the city of | 'Anhlwārah [Anhlwārah] | bi-ḡarīb by near | min to | thalāthīn thirty | jozhan [yī-jana] | fa-'inna behold |
| { 'auwala-hu { the first of it | muta'akhhir posterior | 'an to | ta'rikh the era of | Shḡ [Śaka] | bi-mi'atain by two hundred | |
| { wa-iḥḍā { and one | wa-'arba'in and forty | sanah. years. | Wa-musta'milū-hu And the users of it | yada'ūn put down | Shḡ-kāl [Śaka]-era | |
| { wa-yanḡuṣūn { and lessen | min-hu from it | majmū' the sum of | muka'ab the cube of | 'as-sittah six | wa-murabba' and the square of | |
| { al-khamsah { five | fa-yabḡā and remains | ta'rikh the era of | Balba. [Valabhi]. | Wa-khabaru-hu And his history | 'ātin is coming | |
| { 'ī { in | maudīfi-hi. its place. | Wa-ammā And as regards | Gūbt-kāl [Gupta]-era | fa-kānū they were | kamā as | ḡila is said |
| { ḡauman { a people | 'ashrāran wicked | 'aḡwīya'a strong | fa-lammā and so after | 'inḡaraḡū they perished | urrikha it was dated | |
| { bi-him. { by them. | Wa-ka-'anna And as if that | Blb [Valabhi] | kān was | akhīra-hum. the last of them. | Fa-'inna And behold | |
| { 'auwala { the first | ta'rikhi-him of their era | 'aidan also | muta'akhhir posterior | 'an to | Shḡ-kāl [Śaka]-era | |
| { 241. { 241. | Wa-ta'rikh And the era of | al-munajjimīn the astronomers | yata'akhhār is posterior | 'an to | Shḡ-kāl [Śaka]-era | |
| { 587 { 587 | wa-'alai-hi and on it | buniya is built | zij the canon | Kndkātḡ [Khaṇḡakātaka] | li-Brahmgūpt by [Brahmagupta] | |
| { wa-huwa { and it | 'al-ma'rūf the known | ḡinda-nā with us (<i>chez-nous</i>) | | | bi'l-Arknd. by (the name of) Al-Arkand. | |
| { Fa-'idhan { And so then | sinū the years of | ta'rikh the era of | Shrī-Harish [Śrī-Harsha] | | li-sanatī-nā to our year | |
| { 'al-mumaththal bi-hā { that is used as an example | 1488 1488 | wa-ta'rikh and the era of | Bkrmādt [Vikramāditya] | | 1088 1088 | |
| { wa-Shḡ-kāl { and [Śaka]-era | 953 953 | wa-ta'rikh and the era of | Balba [Valabhi] | 'alladhī which | huwa it | 'aiḡar also |
| { Gūbita-kāl { [Gupta]-era | 712. 712. | | | | | |

TRANSLATION.

" And for this reason they have given them *ap*,² and have adopted the eras of Śrī-Harsha, Vikramāditya, Śaka, **Valabhi**, and the **Guptas**. And as regards the era of **Valabhi**,—who was the ruler of the city of **Valabhi**, which was south of the city of Anhlwārah by nearly thirty *yī-janas*,—its beginning was later than the Śaka era by two hundred and forty-one years. Those who use it put down (*the year of*) the Śaka era, and subtract from it the

² i.e. the eras of the Bhārata war and of the Kalyuga, and certain other methods of reckoning time, just previously detailed by Al-Bīrūnī, who states that they had

been abandoned because of the very large numbers involved in the use of them.

sum of the cube of six and the square of five, and there remains (*the year of*) the era of **Valabhî**. His history is coming in its proper place.³ And as regards the **Gupta** era,—(*the members of the dynasty*) were, it is said, a race wicked (*and*) strong; and so, after they became extinct, people, dated by them. And it seems as if **Valabhî** was the last of them. And so the beginning of their era also is later than the **Śaka** era (*by*) 241 (*years*). And the era of the astronomers is later than the **Śaka** era (*by*) 587 (*years*); and on it is based the astronomical canon (*named*) *Khaṇḍakāṭaka*, by Brahmagupta, which among us is known by (*the name of*) *Al-Arkand*. So, then, 1488 years of the era of Śrī-Harsha are in correspondence with the year (*of Yazdajird*) that we have taken as a gauge; and 1088 of the era of Vikramāditya; and 953 of the **Saka** era; and 712 of the era of **Valabhî**, which is also the **Gupta** era."

The essence of the whole matter, of course, lies in the precise meaning that is to be given to the words which follow the statement that the Guptas were wicked and powerful. Prof. Wright states that, in the original, we have a vague impersonal passive, meaning "it was dated by them," "there was a dating by them," or "people dated by them;" but that this certainly does not expressly imply that this dating took place from the year of the extinction of the Gupta power, and in consequence of that event. That such an interpretation might, if found on other grounds to be justifiable, be given to this expression, may be admitted. But it is at the least equally open to us to interpret the expression as meaning that the Guptas had been so powerful that, even when they were dead and gone, people still used their era to date by. And we have to determine, from an examination of the details of the recorded Gupta and Valabhî dates, which of these two possible interpretations is the one that must be adopted.

And here I will only add, for the present, that the calculation of the dates in question,—and, in particular, of those in the records of the *Parivrajaka Mahārājas*, where we have an expression which shews explicitly that, at the times mentioned, the Gupta sovereignty was still continuing, and that the dates belong to the identical era that was used by the Early Gupta kings themselves,—has proved conclusively that they all belong to one and the same era, running from the epoch of A.D. 319-20; and that, irrespective of the question whether the era was actually established by the Early Guptas, we must refer the rise of the Early Gupta power to somewhere about A.D. 319, instead of placing the period of their

supremacy anterior to that year, and their downfall in it.

There is also one other point in the revised translation, to which special attention should be paid. Prof. Wright's rendering, "(*the year*) 712 of the era of Valabhî, which is also the Gupta era," is essentially different, in its ultimate bearing, from M. Reinaud's, "the year 712 of the era of Ballaba and of that of the Guptas." It shews very clearly that **Albêrûni was speaking of absolutely one and the same era under two names**; not of two different eras, with the same, or almost the same, epoch.

As regards the origin of M. Reinaud's erroneous rendering of Albêrûni's statement, it is clearly to be traced to Mr. James Prinsep's treatment of the *Kahâuṃ* pillar inscription of Skandagupta, in 1838, in the *Jour. Beng. As. Soc.* Vol. VII. p. 36 ff.; which contains the first reference to the Gupta era that I can trace; or, at any rate, the first suggestion of the existence of an era connected with the Guptas, apart from any general reference to the chronological period to which they might be referred. By his rendering of this record, it was dated (*id.* p. 37) "in the year one hundred and thirty-three after the decease of Skandagupta;" on which he remarked (*id.* p. 38) "the death of this prince is here employed as an epoch in a somewhat enigmatical way." The supposed enigma refers to the actual manner in which the total of 133,—or, more properly, 141, as shewn by subsequent examinations of the record,—is arrived at. As regards the other point, the reference of the years to the death of Skandagupta is due only to a mislection of the last word in line 2 of the text. The real reading there is *śānti*, the locative

³ The reference appears to be to the story of the fruit-seller Parika and the king Valabha in Chapter XVII.

"On Hindu Sciences which prey on the Ignorance of People."

singular of *śānta*, in apposition with *rājyē* in the same line, and the real translation is "in the tranquil reign of Skandagupta; in the one hundredth year, increased by thirty and ten and one" (*Corp. Inscr. Indic.* Vol. III. No. 15, page 67). Mr. Prinsep, however, read *śāntēh*, the ablative or genitive singular of *śānti*, 'quiet, tranquillity, calmness, rest, repose : ' and, with this reading, it was, of course, hardly possible to do otherwise than translate it by "after the decease," "of the repose, *i.e.* death," and "after the death," of Skandagupta, and to make the years that were recorded run from that event. No discussion of the question was then entered into. But Skandagupta then was, and still is, the last known king of the direct succession of the Early Gupta dynasty. And it is evidently the above rendering, which first suggested the idea of an era dating from the extermination of the Gupta power at the death of Skandagupta.

When, in 1845, **M. Reinaud** republished collectively, under the title of *Fragments Arabes*

et Persans, certain extracts, with French translations, from works relating to India, which he had previously published separately in the *Journal Asiatique*, in September and October, 1844, and February-March, 1845, he rendered Albêrûnî (*ib.* p. 143) as stating distinctly that the Gupta era dated from the extermination of the Guptas. I do not find that he makes any reference to Prinsep on this specific point. But he shews, throughout, so good an acquaintance with Prinsep's writings, as also with those of other English scholars, that he must certainly have read Prinsep's translation of, and comments on, the Kahâum inscription. And, though he may not have intentionally allowed himself to be guided by Prinsep's views, it can hardly be doubted that he had a reminiscence of the purport of them, when he was translating Albêrûnî's remarks. In fact, in the face of Mr. Rehatsek's, Mr. Kay's, and Prof. Wright's versions, it is difficult to see how M. Reinaud can have arrived at the exact words used in his translation, except under some such predisposing influence.

THE EPOCH OF THE NEWAR ERA.

BY PROFESSOR F. KIELHORN, C.L.E. : GÖTTINGEN.

"The Nêwâr era is peculiar to Nêpâl, where it was introduced in A.D. 880 by Râja Râghava Dêva." "The year begins in October, and 951 years had expired in 1831." From these statements of Sir A. Cunningham,¹ with the substance of which the incidental remarks of other scholars agree, it appears that the epoch of the era spoken of is considered to be A.D. 879-80, and that the first year of that era is supposed to have lasted from about October A.D. 880 to about October 881. The expression that the year begins in October suggests the idea, the correctness of which has not been hitherto proved by documentary evidence, that the Nêwâr year begins with the month Kârttika; and stating more accurately the opinion of those who have written about the matter, the first day of the first current year of the era, according to their view, should be taken to be the day 2,042,759 of the Julian period,

8th October A.D. 880 = Kârttika Śukla 1 of the (northern) Vikrama year 938, current.

In order to arrive at some settlement of the question as to whether or to what extent the Hindus, during the middle ages, were in the habit of dating their documents in *expired* years, I have examined, amongst others, almost every available date recorded in the national era of Nêpâl, and in the course of the necessary calculations I have incidentally come to the following conclusions regarding the Nêwâr era :—

(1.) The epoch of the Nêwâr era is A.D. 878-79, and the first day of the first current year of that era is really the day 2,042,405 of the Julian period, —20th October A.D. 879 = Kârttika Śukla 1 of the (northern) Vikrama year 937, current.

(2.) As regards the arrangement of the two lunar fortnights, the dark half of a month follows upon the bright half of the same month, or, in other words, the scheme of the months is the *amānta* scheme of the southern Vikrama year. And from (1) and (2) together it follows that—

¹ *Indian Era*, p. 74.

(3.) For calculating dates of the Nêwâr era by means of Dr. Schram's most handy Tables,² in order first to obtain the current (northern) Vikrama year, we must add to the *expired* years of the Nêwâr era 937, when a date falls within any of the five months from Kârttika to Phâlguna, and 938, when a date falls within any of the seven months from Chaitra to Âśvina.

To prove these statements, I shall place before the reader twenty-five Nêwâr dates, together with the corresponding European dates. Six of them are taken from the late Pandit Bhagvañlal Indrajî's Inscriptions from Nêpâl, *ante*, Vol. IX. p. 163ff., two from Mr. Bendall's *Journey in Nêpâl and Northern India*, and the remaining seventeen from the same scholar's *Catalogue of Buddhist Sanskrit Manuscripts*. I shall begin with four dates (1-4), in which the years mentioned are distinctly described as *expired* years. After these I shall give nineteen dates (5-23), in which the figures for the years likewise denote expired years, although this is not actually stated in the dates themselves. And I shall conclude with two dates (24 and 25), in which the figures for the years must be taken to denote, exceptionally, *current* years.

A.—Dates in which the years mentioned are described as expired years.

1. Bendall's *Catalogue*, p. 187 :³—

Shat-ttarê (*sic*) pañcha-śatê gatê sdbê Nêpâlîkê mâsi cha Chaitra-samjñê |

Kṛishṇa-pakshê Madan-âbhidhâyâm tithau Śaśâñkâtmaja-vâsarê cha ||

Data :—The year 506 *expired*, the month Chaitra, the dark half, the *tithi* *Madana*, i.e. the thirteenth lunar day, Śaśâñkâtmaja-vâsara, or **Wednesday**.

The corresponding northern Vikrama year is $506 + 938 = 1444$ current; and the corresponding European date is **Wednesday**, March 28, 1386. On that day, at sunrise, the 13th *tithi* of the dark half was current, and it ended 20h 41m after mean sunrise. [If the epoch

were A. D. 879-80, the corresponding date would be Tuesday, April 16, 1387].

2. *Ib.*, p. 30 :—

Dvâdaś-ôttara-pañcha-śatañ prayâtê vibhâ-yasê (?) |

Pausa-śuklê navamyâñ=cha sampûrṇa (!) Guru-vâsarê ||

Data :—The year 512 *expired*, the month Pausa, the bright half, the ninth lunar day. Guru-vâsara, or **Thursday**.

The corresponding (northern) Vikrama year is $512 + 937 = 1449$ current; and the corresponding European date is **Thursday**, January 4, 1392. On that day, at sunrise, the 9th *tithi* of the bright half was current, and it ended 15h 22m after mean sunrise. [If the epoch were A.D. 879-80, the corresponding date would be Monday, December 23, 1392.]

3. *ante*, Vol. IX. p. 183 :—

Samvân=Nêpâlak-âkhyê tribhuvana-dahanê Kâma-bânê prayâtê Mâghê śuklê cha Kâmê tithi...viditê prîti-yôgê cha punyê |

Vârê Pûsh-âbhidhânê makara-ravi-gatê yugma-râsau śaśâñkê

It should be noted that the same year, 533, which here is called an expired year, immediately afterwards, p. 184, where the date is repeated in the more business-like manner—

Samvat 533 Mâgha-śukla-trayôdaśi punarvasu-nakshatrê prîti-yôgê Âditya-vârê— is called simply "the year 533."

Data :—The year 533 *expired*, the month Mâgha, the bright half, the thirteenth lunar day, Âditya-vâra or **Sunday**, the *nakshatra* **Punarvasu**, and the *yôga* **Prîti**.

The corresponding (northern) Vikrama year is $533 + 937 = 1470$ current; and the corresponding European date is **Sunday**, January 15, 1413. On that day, at sunrise, the 13th *tithi* of the bright half was current, and it ended 1h 23m after mean sunrise. Moreover, at sunrise, the moon *was* in the *nakshatra* **Punarvasu**, and the current *yôga* *was* **Prîti**. [If the epoch were A.D. 879-80, the corresponding date

² *Hilfsregeln für Chronologie*, pp. 52 and 53. Dr. Schram professes to give, for the luni-solar calendar, approximate dates only, and the results obtained from his Tables have, therefore, in the following been verified or corrected by Professor Jacobi's Tables for calculating the *tithis*. But, as a matter of fact, Dr. Schram's Tables, in the majority of cases, do yield absolutely true results, and they are far more convenient and useful than any other similar Tables, and I feel sure that they will be generally adopted

when they become more widely known. It is for this reason that, in the following, I have first converted the Nêwâr dates into dates of the *northern* Vikrama year, instead of converting them, as might otherwise appear more natural, into dates of the *southern* Vikrama year.

³ In the following I shall give the dates exactly as given in the works from which I take them, and I shall not attempt any corrections except where it may be absolutely necessary.

would be Friday, February 2, 1414, *nakshatra* Pushya, and *yōga* Saubhāgya.]

4. Bendall's *Catalogue*, p. 147 :—

Yātē Naipālīka-varshē tri-yugma-randhra-saṁyutē |

Mārgaśīrshē śśīta-pakshē daśamyām Ravi-vāsarē ||

Data :—The year 923 expired, the month Mārgaśīrsha, the dark half, the tenth lunar day, Ravi-vāsara or **Sunday**.

The corresponding (northern) Vikrama year is $923 + 937 = 1860$ current; and the corresponding European date is **Sunday**, December 19, new style, 1802. On that day, at sunrise, the 10th *tithi* of the dark half was current, and it ended 18 hours after mean sunrise. [If the epoch were A.D. 879-80, the corresponding date would be Thursday, December 8, new style, 1803.]

B.—Dates in which the years mentioned must be regarded as expired years, although they are not described as such in the dates themselves.

5. *Ib.*, p. 151 :—

Pañchatrīmś-ādhikē śbdē śatatama praśātē(?) Chaitra-māsē himābhā |

Vikhyātē śsmin daśamyān=Danīmja(? Danuja)ripugurau vāsarē saṁpraśastē ||

Data :—The year clearly is 135, but the expression *praśātē* following upon *śatatama* is unintelligible; Mr. Bendall hesitatingly suggests the reading *pragatē* ('elapsed,' see Palæographical Introduction, p. xxv. note), which, he admits, offends against the metre. The remaining data are,—the month Chaitra, the bright half, the tenth lunar day, Danuja-ripuguru-vāsara or **Thursday**.

Taking 135 to be the year expired, the corresponding northern Vikrama year is $135 + 938 = 1073$ current. In that year, Chaitra was an intercalary month, and the corresponding European date, for the *adhika* Chaitra, would be **Thursday**, March 3, 1015, when the 10th *tithi* of the bright half ended 4h 2m after mean sunrise; and for the *nija* Chaitra, Friday, April 1, 1015.

* Another date which must contain an intercalary month, is given in Mr. Bendall's *Catalogue*, p. 162,—"śamvat 739 Śrāvana-nakṣatra-mās' Leśhva-pakṣe," here the word *nakṣatra* appears to be corrupt, but the corresponding northern Vikrama year is 1077 current, when Śrāvana was an intercalary month.

† See below, date 16. According to the *Dharmasudhāsira*, the birth (or descent) of the Gangā took place on the *saptami* or 7th lunar day of the bright half of

As the former date is evidently the one intended, the result of the calculation suggests the reading—

Pañchatrīmś-ādhikē śbdē śatatama itarē Chaitra-māsē, "in the 135th year, in the other, i.e., *adhika* month Chaitra,"—

Which both from a grammatical and a metrical point of view is unobjectionable.* [Taking 135 to be the current year, the date corresponding to Chaitra śukla 10, with the epoch A.D. 878-79, would be Sunday, March 14, 1014; and in that year there was, of course, no intercalary month.]

6. *Ib.*, p. 168 :—

Saṁvat 188 Bhādrapada-śukla-paurṇamāsyāḥ Śukra-dinē.

Data :—The year 188, the month Bhādrapada, the bright half, the full-moon day, Śukra-dina or **Friday**.

Taking 188 to be the year expired, the corresponding northern Vikrama year is $188 + 938 = 1126$ current; and the corresponding European date is **Friday**, August 15, 1068, when, at 22h 15m Greenwich time, there was a lunar eclipse. [With 188 current, and the epoch A.D. 878-79, the corresponding date would be Monday, August 17, 1067, when, at 5h 31m Greenwich time, there also was a lunar eclipse.]

7. Bendall's *Journey*, p. 80 :—

Tribhir=varshaiḥ samāyuktē saṁvatsara-śata-dvayē |

Vaiśākha-śukla-śaptamyām Budhē pushy-ōdayē śubhā ||

Data :—The year 203, the month Vaiśākha, the bright half, the seventh lunar day, Budha or **Wednesday**, the *nakshatra* Pushya.

Taking 203 to be the year expired, the corresponding northern Vikrama year is $203 + 938 = 1141$ current; and the corresponding European date is **Wednesday**, April 26, 1083, when, at sunrise, the moon was in the *nakshatra* Pushya. Civilly, Wednesday, April 26, was Śu. di. 6, but the 7th *tithi*, mentioned in the date, began as early as 4h 7m after mean sunrise.† [With 203 current, and the epoch

Vaiśākha, and ceremonies in honour of that event must be performed on that civil day on which the *saptami* is current at midday. The inscription, from which the above date is taken, simply records the setting up of an image in honour of the Sun, and contains no allusion to Gangā.—According to a general rule given in the *Dharmasudhāsira*, any rites whatever of the 7th *tithi* must be performed on that civil day on which the 7th *tithi* meets with the 6th *tithi*.

A.D. 878-79, the corresponding date would be Friday, April 8, 1082, *nakshatra* Pushya.]

8. Bendall's *Catalogue*, p. 182 :—

Samvat 285 Śrāvaṇa-śukla-āṣṭamyaṁ=Āditya-dinē.

Data :—The year 285, the month Śrāvaṇa, the bright half, the eighth lunar day, Āditya-dina or **Sunday**.

Taking 285 to be the year expired, the corresponding northern Vikrama year is $285 + 938 = 1223$ current; and the corresponding European date is **Sunday**, July 18, 1165. On that day, at sunrise, the 8th *tithi* of the bright half was current, and it ended 12 hours after mean sunrise. [With 285 current, and the epoch A.D. 878-79, the corresponding date would be Wednesday, July 29, 1164.]

9. *Ib.*, p. 155 :—

Samvat [336] Pausa-kṛishṇa-āṣṭamyaṁ Vṛihaspati-vāsare vaiśākha-nakshatrē.

Data :—The year 336 (?), the month Pausa, the dark half, the eighth lunar day, Vṛihaspati-vāsara or **Thursday**, the *nakshatra* **Visākhā**.

Taking 336 to be the year expired, the corresponding (northern) Vikrama year is $336 + 937 = 1273$ current; and the corresponding European date is **Thursday**, January 14, 1216. On that day, at sunrise, the 8th *tithi* of the dark half was current, and it ended 5h 32m after mean sunrise. Moreover, at sunrise, the moon was in the *nakshatra* **Visākhā**. The result of the calculation thus shows that the figures for the year, 336, about which Mr. Bendall is somewhat doubtful, because the date has been retouched, and because "the day of the week and month" were supposed "not to tally for the year 336," are quite correct. [With 336 current, and the epoch A.D. 878-79, the corresponding date would be Friday, December 26, 1214, *nakshatra* Svātī.]

10. *Ib.*, p. 84 :—

Samvat 505 Kārtika-śukla-āṣṭamyaṁ tithau Sanimvara-vāsare.

Data :—The year 505, the month Kārttika, the bright half, the eighth lunar day, Śanaiśchara-vāsara or **Saturday**.

Taking 505 to be the year expired, the corresponding (northern) Vikrama year is $505 + 937 = 1442$ current; and the correspond-

ing European date is **Saturday**, October 22, 1384. On that day, at sunrise, the 8th *tithi* of the bright half was current, and it ended 16h 52m after mean sunrise. [With 505 current, and the epoch A.D. 878-79, the corresponding date would be Tuesday, November 3, 1383.]

11. *Ib.*, p. 191 :—

Samvata 509 Jyaishta-śukla-daśamyaṁ tithau Śukra-vāsare.

Data :—The year 509, the month Jyaishta, the bright half, the tenth lunar day, Śukra-vāsara or **Friday**.

Taking 509 to be the year expired, the corresponding northern Vikrama year is $509 + 938 = 1447$ current; and the corresponding European date is **Friday**, June 4, 1389. On that day, at sunrise, the 10th *tithi* of the bright half was current, and it ended 1h 8m after mean sunrise. [With 509 current, and the epoch A.D. 878-79, the corresponding date would be Saturday, May 16, 1388.]

12. Bendall's *Journey*, p. 83 :—

Śrīman-Nēpalika-samvat 512 Vaiśākha-kṛishṇa-shaṣṭhyāṁ tithau || gara-karaṇē⁶ | visva-muhūrttē śrāvaṇa-nakshatrē | aindra-yōgē | Āditya-vāsare ||

Data :—The year 512, the month Vaiśākha, the dark half, the sixth lunar day, the *karaṇa* **Gara**, the *muhūrta* Viśva, the *nakshatra* **Śrāvaṇa**, the *yōga* **Indra**, Āditya-vāsara or **Sunday**.

Taking 512 to be the year expired, the corresponding northern Vikrama year is $512 + 938 = 1450$ current; and the corresponding European date is **Sunday**, May 12, 1392. On that day, the 6th *tithi* of the dark half commenced about sunrise, and the first half of that *tithi*, i.e. the time from about sunrise to about sunset, was the 41st *karaṇa*, called **Gara**. At sunrise, the moon was in the *nakshatra* **Śrāvaṇa**, and the current *yōga* was **Indra**. [With 512 current, and the epoch A.D. 878-79, the corresponding date would be Tuesday, April 25, 1391, the 42nd *karaṇa*, called Banij, *nakshatra* Uttarā Āshādhā, and *yōga* Sukla.]

13. Bendall's *Catalogue*, p. 155 :—

Samvata 532 Māgaśira-śukla | saptamyaṁ tithau śatavṛisha-nakshatrē | haraṣaṇa-pra-(para ?)-vajra-yōga | Āditya-vāsare ||

Data :—The year 532, the month Māgaśiras, Government." My calculation of the date renders it certain that the reading *gaur-karaṇē* is right.

⁶ The published version has *śarākaraṇē*, supposed to be the Hindustani *سرکونی*, and rendered "by order of

the bright half, the seventh lunar day, Âditya-vāsara or **Sunday**, the *nakshatra* 'Śatavṛisha,' i.e. evidently **Satabhishaj**, and the *yōgas* **Harshaṇa** and **Vajra**.

Taking 532 to be the year expired, the corresponding (northern) Vikrama year is $532 + 937 = 1469$ current; and the corresponding European date is **Sunday**, November 22, 1411. On that day, at sunrise, the 7th *tithi* of the bright half was current, and it ended 13h 36m after mean sunrise. Moreover, at sunrise, the moon was in the *nakshatra* **Satabhishaj**, and the current *yōga* was **Vajra**. [With 532 current, and the epoch A.D. 878-79, the corresponding date would be Wednesday, December 3, 1410, *nakshatra* Pūrvā-Bhadrapadā, and *yōga* Vyatipātā.]

14. *Ib.*, p. 180:—

Samvat 532 Āshāḍha-kṛishṇa 1 êkadaśyām tithau 1 kârttika-ghaṭhî 20 1 rôhinî-nakshatra 1 gaṇḍa-ghaṭhî 6 vṛiddi-yôgê 1 Sôma-vāsarê 1

Date:—The year 532, the month Āshāḍha, the dark half, the eleventh lunar day. Sôma-vāsara or **Monday**, the *nakshatras* **Kṛittikā** and **Rôhinî**, and the *yōgas* **Gaṇḍa** and **Vṛiddhi**.

Taking 532 to be the year expired, the corresponding northern Vikrama year is $532 + 938 = 1470$ current; and the corresponding European date is **Monday**, July 4, 1412. On that day, at sunrise, the 11th *tithi* of the dark half was current, and it ended 21 h. 20 m. after mean sunrise. Moreover, calculated by Prof. Jacobi's tables, the moon at sunrise was in the *nakshatra* **Rôhinî**, and the current *yōga* was **Vṛiddhi**. [With 532 current, and the epoch A.D. 878-79, the corresponding date would be Thursday, July 16, 1411, *nakshatra* **Mṛiga**, and *yōga* Vyāghrātā.]

15. *Ib.*, p. 183:—

Samvat 749 Jyeshtha-kṛishṇa amāvāsya surya grāsa-sa

Date.—The year 749, the month Jyeshtha, the dark half, new-moon day, a solar eclipse.

Taking 749 to be the year expired, the corresponding northern Vikrama year is $749 + 938 = 1687$ current; and the corresponding European date is June 11, 1629. On that day, at 56m Greenwich time, or at Lanka about 1 hour, there was a total solar eclipse, visible

in India. [With 749 current, and the epoch A.D. 878-79, the corresponding date would be June 21, 1628; and on that day there also was a solar eclipse; but this eclipse was not visible in India.]

16. *ante*, Vol. IX. p. 185:—

Nêpāla-varshê svara-śara-turagair = aṅkitê Phālgunîyê pakshê prâptê valakshê = maraguru-divasê śaṅkara-rkshê daśam-yām 1; and on p. 186:—Samvat 757 Phālguna-māse śukla-pakshê daśamyām tithau ârdra-para-punar vasu-nakshatrê âyushmân-yôgê Bṛihaspati-vāsarê.

Data:—The year 757, the month Phālguna, the bright half, the tenth lunar day, Bṛihaspati-vāsara or **Thursday**, the *nakshatras* **Ârdra** and **Punarvasu**, and the *yōga* **Âyushmat**.

Taking 757 as the year expired, the corresponding (northern) Vikrama year is $757 + 937 = 1694$ current; and the corresponding European date is **Thursday**, February 23, 1637, when, at sunrise, the moon was in the *nakshatra* **Ârdra**, and, from 13 to 14 hours later, in **Punarvasu**, and when the current *yōga* was **Âyushmat**. Civilly, Thursday, February 23, was śu. di. 9, but the 10th *tithi* mentioned in the date began 5h 49m after mean sunrise.⁷ [With 757 current and the epoch A.D. 878-79, the corresponding date would be Sunday, March 6, 1636, *nakshatra* Pushya, and *yōga* Atigaṇḍa.]

17. *Ib.*, p. 188:—

Samvat 769 Phālguna śukla shashtīyām tithau anurādhā-nakshatrê harshaṇa-yôgê Bṛihaspati-vāsarê.

Data:—The year 769, the month Phālguna, the bright half, the sixth lunar day, Bṛihaspati-vāsara or **Thursday**, the *nakshatra* **Anurādhā**, and the *yōga* **Harshaṇa**.

Assuming these data to have been given correctly, the corresponding European dates are,—for 769 expired ($= 769 + 937 = 1706$ Vikrama current) Wednesday, February 7, 1649, the 6th *tithi* of the bright half ending 20h 6m after mean sunrise, *nakshatra* Bharaṇî (No. 2 instead of No. 17), and *yōga* Brahman (No. 25 instead of No. 14);—and for 769 current, Saturday, February 19, 1648, *nakshatra* Bharaṇî and *yōga* Vaidhṛiti (No. 27 instead of No. 14). These days evidently are

⁷ See above, date 7.—I cannot find that any religious ceremony is specially prescribed for the 10th *tithi* of the bright half of Phālguna. According to the *Upanishads*

dharmas, fasts, etc., of the 10th *tithi* should take place on that day on which the 10th *tithi* meets with the 9th

wrong; and a satisfactory result is obtained only, if we take the word *śukla* of the date to have been put, either in the original inscription or by the editor, erroneously for the word *krishṇa*. For the European date corresponding to the sixth lunar day of the *dark* half of Phālguna, 769 expired, is **Thursday**, February 22, 1649, when the 6th *tithi* of the *dark* half ended 12h 7m after mean sunrise, and when, at sunrise, the moon *was* in the *nakshatra* **Anurādhā**, and the current *yōga* *was* **Harshaṇa**.

18. *Ib.*, p. 191 :—

Nēpālē saṁvatē = smin = haya-giri-muni-bhiḥ saṁyutē Māgha-māsē saptamyaṁ śukla-pakshē Ravidina-sahitē rēvati-ri-ksharājē | yōgē śrī-siddhi-saṁjñē.

Data :—The year 777,* the month Māgha, the bright half, the seventh lunar day. Ravidina or **Sunday**, the *nakshatra* **Rēvati**, and the *yōga* **Siddhi** (!).

Taking 777 to be the year expired, the corresponding (northern) Vikrama year is $777 + 937 = 1714$ current; and the corresponding European date is **Sunday**, January 11, 1657, when the 7th *tithi* of the bright half ended 22h 11m after mean sunrise. Moreover, at sunrise, the moon *was* in the *nakshatra* **Rēvati**. As to the *yōga*, the result calculated by Prof. Jacobi's tables would be *Sādhya*; and as this *yōga* (No. 22) is next to *Siddha* (No. 21), not to *Siddhi* (No. 16), I feel certain that the word *siddhi* of the date has been put by mistake for *siddha*. [With 777 current, and the epoch A.D. 878-79, the corresponding date would be Wednesday, January 23, 1656, *nakshatra* *Aśvinī*, and *yōga* *Śukla*.]

19. *Ib.*, p. 192 :—

Nēpāl-ābdē gagana-dharaṇi-nāga-yuktē kil-Ōrjē māsē pakshē vidhu-virahitē su-dvitiyā-tithau . . . Ravau.

Data :—The year 810, the month Kārttika, the *dark* half, the second lunar day, Ravi or **Sunday**.

Taking 810 to be the year expired, the corresponding (northern) Vikrama year is $810 + 937 = 1747$ current; and the corresponding European date is **Sunday**, October 20, 1689. On that day, at sunrise, the 2nd *tithi* of the

dark half was current, and it ended 7h 35m after mean sunrise. [With 810 current, and the epoch A.D. 878-79, the corresponding date would be Tuesday, October 30, 1688.]

20. Bendall's *Catalogue*, p. 142 :—

Sambat 820 Kārttika-māsya-śukla-pakshē trayōdasyāṁ tithau rēvati-nakshatē vajra-yōge . . . Vṛihaspati-vāsarē, and other particulars which I omit here.

Data :—The year 820, the month Kārttika, the bright half, the thirteenth lunar day. Vṛihaspati-vāsara or **Thursday**, the *nakshatra* **Rēvati**, and the *yōga* **Vajra**.

Taking 820 to be the year expired, the corresponding (northern) Vikrama year is $820 + 937 = 1757$ current; and the corresponding European date is **Thursday**, October 26, 1699. On that day, at sunrise, the 13th *tithi* of the bright half was current, and it ended 12h 45m after mean sunrise. Calculated by Prof. Jacobi's tables, the moon, at mean sunrise, was in the *nakshatra* *Aśvinī*, the *nakshatra* following upon **Rēvati**, and the current *yōga* was *Siddhi*, the *yōga* following upon **Vajra**. [With 820 current, and the epoch A.D. 878-79, the corresponding date would be Sunday, November 6, 1698, *nakshatra* *Bharani*, and *yōga* *Parigha*.]

21. *ante*, Vol. IX. p. 193 :—

Abdē Rāma-prajēsvarāsyā-vasubhir=Māghē sitē pakshakē

śūlē ch-ōttaraphālgunē Śāsadhare vārē dvitīyā-tithau |

Data :—The year 843, the month Māgha, the bright half, if the word following upon the word *Māghē* is taken (as it has been taken by the editor of the inscription) to be *sitē*, but the *dark* half, if the same word is taken to be *avitē* (*Māghē* 5. *śitē*): the second lunar day, Śāsadhara-vāra or **Monday**, the *nakshatra* **Uttarā-Phālgunī**, and the *yōga* **Śūla**.

With 843 expired (= $843 + 937 = 1780$ Vikrama current) the corresponding European date for the *bright* half of Māgha is Sunday, January 27, 1723; and with 843 current, the corresponding date, also for the *bright* half, is January 8, 1722, which *was* a Monday, but on which the moon was in the *nakshatra* *Sraviṣṭhā* (No. 23 instead of No. 12), and when the current *yōga* was *Vyātipāta* (No. 17 instead of No. 1).

* Not 778, as given by the editor of the inscription

Both days clearly are wrong, and a satisfactory result is obtained only for the *dark* half of Māgha: for the date corresponding to the second of the *dark* half of Māgha, 843 expired.—is **Monday**, February 22, 11, 1723, when the 2nd *tithi*, of the *dark* half ended 6h 6m after mean sunrise, and when at sunrise the moon *was* in the *nakshatra* Uttara-Phālguni, and the current *yōga* *was* **Sūla**. [With 843 current, and the epoch A.D. 878-79, the corresponding date, for the *dark* half of Māgha, would be Tuesday, January 23, 1722.]

22. Bendall's *Catalogue*, p. 5 :—

Naipalik-ābdē bhuja-parvata-vasu-saṁyutē |
māse Āśvini śśitē | trayōdaśāmita-tithau |
tarā chitrā priti-yōgē . . . Bhāskaraputra-
vasarē . . .

Data :—The year 872, the month Āśvina, the *dark* half (Āśvinē śśitē), the thirteenth lunar day, Bhāskaraputra-vāsara or **Saturday**, the *nakshatra* **Chitrā**, and the *yōga* **Pṛiti**.

Taking 872 to be the year expired, the corresponding northern Vikrama year is $872 + 938 = 1810$ current; and the corresponding European date is **Saturday**, November 4, new style, 1752, when the 13th *tithi* of the *dark* half ended 17 minutes after mean sunrise. Calculated by Prof. Jacobi's Tables, the moon, at sunrise, *was* in the *nakshatra* **Chitrā**, and the current *yōga* *was* Āyushmat, the *yōga* following upon **Pṛiti**.—As the reading Āśvinē śśitē might be considered doubtful, I have calculated also the 13th of the *bright* half of Āśvina, with the result—Saturday, October 21, new style, 1752, *nakshatra* Rêvatī (No. 27 instead of No. 14), and *yōga* Vajra (No. 15 instead of No. 2), which shows that the day intended must be the 13th of the *dark* half. [With 872 current, and the epoch A.D. 878-79, the corresponding date would be Sunday, October 6, 1751, *nakshatra* Hasta, and *yōga* Vaidhṛiti.]

23. *Ib.*, p. 40 :—

Samvat 995 miti Vaiśākha kṛishṇa 2 Saṁ-
śvara-vāra.

Data :—The year 995, the month Vaiśākha, the *dark* half, the second, Saṁivāra or **Saturday**.

Taking 995 to be the year expired, the corresponding northern Vikrama year is $995 + 938 = 1933$ current; and the corresponding European date is **Saturday**, May 22, new

style, 1875, when the 2nd *tithi* of the *dark* half ended 9h 30m after mean sunrise. [With 995 current, and the epoch A.D. 878-79, the corresponding date would be Sunday, May 3, 1874.]

C.—Dates in which the years mentioned must be regarded, exceptionally, as current years.

24. *Ib.*, p. 172 :—

Samvat 157 Vaiśākha-śukla-tritīyāyām Śu-
kra-dinē.

Data :—The year 157, the month Vaiśākha, the *bright* half, the third lunar day, Śukra-dina or **Friday**.

Taking 157 to be the current year, the corresponding northern Vikrama year is 156 expired $+ 938 = 1094$ current; and the corresponding European date is **Friday**, April 2, 1036, when the 3rd *tithi* of the *bright* half ended 9h 21m after mean sunrise. [With 157 expired and the epoch A.D. 878-79, or with 157 current and the epoch A.D. 879-80, the corresponding date would be Thursday, April 21, 1037; and with 157 expired, and the epoch A.D. 879-80,—Monday, April 10, 1038.]

25. *Ib.*, p. 148 :—

Samvat 927 Vaiśākha - māśya - śukla - pakshē
chaturdaśyām tithau chittā-nakshatrē vāja-yōgē
. . . Vṛihaspati-vāra.

Data :—The year 927, the month Vaiśākha, the *bright* half, the fourteenth lunar day, Vṛihaspati-vāra or **Thursday**, the *nakshatra* **Chitrā**, and the *yōga* **Vajra**.

Taking 927 to be the current year, the corresponding northern Vikrama year is 926 expired $+ 938 = 1864$ current; and the corresponding European date is **Thursday**, May 1, new style, 1806, when the 14th *tithi* ended 19h 25m after mean sunrise. At sunrise, the moon *was* in the *nakshatra* **Chitrā**, and the current *yōga* *was* **Vajra**. [With 927 expired and the epoch A.D. 878-79, or with 927 current and the epoch A.D. 879-80, the corresponding date would be Wednesday, May 20, new style, 1807, *nakshatra* Svātī, and *yōga* Vairīyas; and with 927 expired and the epoch A.D. 879-80,—Monday, May 9, new style, 1808, *nakshatra* Svātī, and *yōga* Vyatpāta.]

An examination of these 25 dates will show that, as regards the settlement of the true epoch of the Nêwâr era, the most important of them

are the first four and the last two dates. If we had only the 19 dates, from 5 to 23, the years mentioned in them might of course be taken as *current* years, and in that case the results as regards week-days, etc., would be the same with the epoch A.D. 879-80. But that epoch will absolutely not do for the dates 1-4, which distinctly give *expired* years, nor for the dates 24 and 25; and, unless we are prepared to assume an error in every one of those six dates, the only epoch that leads to satisfactory results for them, and generally for every one of the 25 dates, is A.D. 878-79, or, more accurately, that epoch by which the era began on 20 October, A.D. 879. And this, again, shows that the years given in the dates 5-23, beginning with the Nêwâr year 135 and ending with 995, must undoubtedly be taken as *expired* years, although the dates contain no such word as *atîta*, *gata*, *yâta*, or any other synonymous expression.

As regards the commencement of the Nêwâr year, a comparison of date 22, which gives the 13th day of the dark half of the month Āśvina, with date 10, which gives the 8th day of the bright half of the month Kārttika,⁹ and of which the former requires the addition of 938 and the latter the addition of only 937 for the obtainment of the current northern Vikrama year, clearly shows that the year commences on one of the ten days intervening between those two dates; in other words, that it undoubtedly does begin with the first day of the bright half of Kārttika, the day on which it is required to begin.

And that the arrangement of the two

lunar fortnights is the *amānta* arrangement of the southern Vikrama year, is clearly proved by the dates 1, 4, 9, 12, 14, 15, 17, 19, 21, 22, and 23; for those eleven dates give days in dark fortnights, which, as I have taken care to ascertain, in every instance, work out satisfactorily only with the *amānta* scheme of the month.

Finally, I may draw attention to the dates 7 and 16, because in them the words *saptam-yān*, 'on the seventh (*tithi*),' and *daśam-yān tithau*, 'on the tenth *tithi*,' clearly do not mean 'on the day on which the 7th *tithi* ended' and 'on the day on which the 10th *tithi* ended;' but mean exactly what they signify, and thus happen to denote, in the first date, the 6th day, and in the other, the 9th day of the lunar fortnight. The fact is that, when a *tithi* begins on one day and ends on the next, the ceremonies prescribed for it must, under certain circumstances which are fully described in such works as the *Dharmasindhusāra*, be performed on the civil day on which the *tithi* commences, and not on the civil day on which the *tithi* ends; and it is highly desirable that somebody should compile, for easy reference, a short and clear tabular statement, showing the *tithis* which are liable to be treated in this way, and the exact conditions under which, for religious purposes, they must be connected with the civil day on which they commence. Anyhow, it is clear that, in calculating dates, it may sometimes be necessary to ascertain the beginning as well as the end of a *tithi*, a process which now has been rendered more than easy by Professor Jacobi's Tables.

SOME SPECIMENS OF SOUTH INDIAN POPULAR EROTIC POETRY.

BY PANDIT S. M. NATESA SASTRI, M.F.L.S.

Love Songs in Southern India are as numerous as elsewhere, and large numbers of books exist everywhere containing them. Very few,

however, are worth collecting, or the trouble of publication in translation. But as it is of interest to gather specimens of their purely

⁹ Arranged in the sequence of the months, the 25 dates would stand as follows.—

- Date 10, Kārttika, Śukla 8
- Date 20, Kārttika, Śukla 13
- Date 19, Kārttika, Kṛṣṇa 2
- Date 13, Mārgaśīras, Śukla 7
- Date 1, Mārgaśīras, Kṛṣṇa 10
- Date 2, Pūṣa, Śukla 9
- Date 9, Pūṣa, Kṛṣṇa 8
- Date 18, Māgha, Śukla 7
- Date 3, Māgha, Śukla 13
- Date 21, Māgha, Kṛṣṇa 2
- Date 16, Phālguna, Śukla 10
- Date 17, Phālguna, Kṛṣṇa 6

- Date 5, Chaitra, Śukla 10
- Date 1, Chaitra, Kṛṣṇa 13
- Date 24, Vaiśākha, Śukla 3
- Date 7, Vaiśākha, Śukla 7
- Date 25, Vaiśākha, Śukla 14
- Date 23, Vaiśākha, Kṛṣṇa 2
- Date 12, Vaiśākha, Kṛṣṇa 6
- Date 11, Jyāishtha, Śukla 10
- Date 15, Jyāishtha, Kṛṣṇa 15
- Date 14, Āślāṣṭha, Kṛṣṇa 11
- Date 8, Śrāvaṇa, Śukla 8
- Date 6, Bhādrapada, Śukla 15
- Date 22, Āśvina, Kṛṣṇa 13

erotic verse from the lips of the people themselves, I give three ordinary love songs in the following pages, which are good ones of their kind.

In addition to what may be called the general love songs of the people, there exists a very large number of **songs and ditties which are sung at ceremonies connected with marriages**, some of which are curious and well worth preserving. Of these the **Nalaṅgupāṭṭu** are of great interest, and I give below six specimens. At an ordinary infant marriage when the ritual is over it is customary to seat the bride and bridegroom (both children) opposite each other on a fine carpet or mat, and to make the bride do mock obeisance to her husband. The boy is then made to sing some formal song of acceptance thereof. This ceremony, which is entirely a female one—no adult male being present—is called *nalaṅgu*, and hence the name (*nalaṅgupāṭṭu*) of the songs connected with it. Sometimes a ball made of flowers is rolled between the bride and bridegroom, sometimes the bride has to adorn the ankles of the bridegroom and *vice versa*, while sometimes scented flowers are scattered about. These details, of course, vary with each locality, the songs which accompany them complying with each variation.

In addition to the above occasion every formal visit that the bridegroom makes to the bride's house and *vice versa* before the real marriage comes off is made an excuse for a *nalaṅgu*, but it is never practised after they have once lived together.

When **girls attain puberty** it is, or rather has been, customary for all the young girls of the village to collect and to sing songs of the most obscene nature! Males are on such occasions rigidly excluded. In the present day, however, this revolting custom has practically died out, being continued only in remote villages off the usual lines of communication. I have naturally given no specimens of these.

Epithalamia are exceedingly common in the south of India, and are there known as "**Open-the-door Songs**." I give one specimen. After the final nuptial ceremonies are over the bride and bridegroom are conducted to the nuptial chamber and are locked in. The ladies of their respective families then collect outside the door,

and sing songs, generally descriptive of the amours of some god. In these the goddess is usually represented as scolding the god with having gone astray with some other female. They get their peculiar name because they are invariably followed by the request, "Open-the-door."

As far as I have been able to ascertain, the songs and customs above alluded to date no further back than the time of the introduction of Vaishnavism into Southern India, especially those which celebrate in verse the amorous adventures of Kṛṣṇa with his *gōpīs*.

LOVE SONGS.

Song No. I.

ALAGITE BHAGYAMAYA.

Chorus.—*Alagitē bhāgyamāyā mariēmi vāḍ-
Alagitē bhāgyamāyā ||*

I.

*Taliru-bōṇirō vāni daṇḍiṇcha galalā ||
Alagitē bhāgyamāyā, &c.*

II.

*Arasompu māṭalādē vāniki nē
taruṇinō māñchi dānanayyēnā
Sarasaku rādūya sakiyarō nāmōm.
Tirigi tādūḍēṁō dēvudunnāḍu ||
Alagitē bhāgyamāyā, &c.*

III.

*Bāḷilēḍikan=ila nātō bandu
tsāluyābōlu santōshamāya
nīlūgnēvāni kitavugāḍēṁō
Nīlavēṇirō nāti nenarintsukalēkanā ||
Alagitē bhāgyamāyā, &c.*

IV.

*Bāla prāṇamūḍḍē bhūmayyēñchi nannu
Vāḷḷina suḍḍulennu nō galuvu
Chāḷa nātō bāsaba chēsīnāḍi jō
Bālarō Murragōṇḷuḍu appāḷuḍu vāḍu ||
Alagitē bhāgyamāyā, &c.*

IF HE IS DISPLEASED WITH ME.

Chorus.—If he is displeased with me, then so my happiness has been only so much ¹ If he is displeased.

I.

*Ladies! How can I punish him? ²
If he is displeased, &c.*

¹ i.e. it is over.

II.

How can I be to his liking who does not come to me to toy with me, but only to talk. O! friends! I do not know that he will ever look on my face again. God alone can protect me!

If he is displeased, &c.

III.

Ladies! Why does he not speak to me often? All my pleasure is over! Perhaps I am not as much to his liking as you are. O ye dark-haired ladies! He has forgotten all his sincerity in those good old days towards me.

If he is displeased, &c.

IV.

He captivated my heart when I was young, and there are several things, many things could I say of our dalliance! Many kinds of pleasure he has given me! Young ladies, where is my Muvvagôpâla now?

If he is displeased, &c.

Song No. 2.

AKKARO, YORVANI VARU SARASADU.

Chorus.—*Akkarô yorvani varu sarasadu
gâlani yâlukonḍe âlukonēru* ||

I.

*Mrokkadaginavani mulumâṭṭalavâni
Muvvagôpâlasâmini yevarainagâni* ||

Akkarô, &c.

II.

*Râma vâni dâlachinapḍe raviku krikkirisi
gubba*

*lêma rommella nimḍunē vâni mâtamē
Nâ manasa pûi pûi nimḍunē vâni zûchirē
Nuvvanilhal abhinatḥamḍunē yevarainagâni* ||

Akkarô, &c.

III.

*Mitirâ vâḍimla rachchi velami gangilîṇchitē
Yemâ badalika dirunē vâsanu gâni
Kamṭu tōpanu tsallârunē yintâkadunâ
Santâsanalla jêḥunē yevarainagâni* ||

Akkarô, &c.

IV.

*Pâni Muvvagôpâlada pûni cho gi v sîtē nâ
Mêma pulakaluppa tillunē nâ tamirēṇa
Vânikē birâṇa chollunē vani quḍina
Manasam ealâ raṭṭillunē yevarainagâni* ||

Akkarô, &c.

WELL, SISTERS! IF SOME SPEAK ILL OF HIM.

CHORUS.—Well, sisters! If some speak ill of him,² let them keep their opinion.

I.

My Muvvagôpâlasâmi is worthy of my worship and is sweet of speech.

Well sisters, &c.

II.

Ladies, if I just think of him my gown is torn to tatters.* My breasts rise up and fill the whole space round about, and my mind soars higher and higher. If I but get a glimpse of him, I think I have obtained the nine kinds of wealth.

Well sisters, &c.

III.

If he just comes to me and exchanges kisses, how much of happiness comes upon me. All my heart becomes cooled (refreshed). Not only this, all my pleasure comes from the mere sight of him.

Well sisters, &c.

IV.

If my Muvvagôpâla place his hand lovingly on my body I begin to perspire with joy. He alone is able to please me, and my mind in his company feels ever delighted.

Well sisters, &c.

Song No. 3.

ADARINĠ MOVI.

Chorus.—*Adarinē mōvi tarakutânē vadilînē
nēi* ||

I.

*Madilînē vâḍmō mandrimelḥyâḍlâ
Sulati Muvvagôpâla zûchinadi madala* ||

Adarinē mōvi, &c.

II.

*Ilî ymō mājâ chitaka rachchi badarîṇē
pējâ.*

*Nîḍura kṇēṭṭirâka ninnabalanunt.
Chadarîṇē châtṭanu chitiga yēmî sētṭu* ||

Adarinē mōvi, &c.

III.

*Appud k mōmā nannavâḍḍala jêṇē utāṇu
Yoppaka adavacalavaka mḍata zûchî
Yoppa ṇēṇi vâḍu sarasuranēṇmō* ||

Adarinē mōvi, &c.

² For not being amorous enough.

³ i.e. my body swells so with emotion.

IV.

Līlatōnīnīlu vachchi tagilīnchēnē, mandu
Bālarō Muvvagōpāludu nannūjūda
Nāduṁmēnēmō jālanū jēsūu ||
Adanē mōri, &c.

MY LIPS DANCE.

CHORUS.—My lips dance and of itself the knot of my garment becomes loose.*

I.

He sowed enchantment in my mind. O Lady, from the moment I saw my Muvvagōpāla.

My lips dance, &c.

II.

This has surely been some enchantment. The parrot came to me and left me after confusing my mind. Sleep by visiting my eyes has troubled me since last night. My heart breaks! Friend, what shall I do?

My lips dance, &c.

III.

Ladies! Even then only he wanted to kiss me, and seeing that my people were a hindrance to it he went away in great anger.

My lips dance, &c.

IV.

He came here in sport and has sown the seeds of love in me! Young Ladies! Muvvagōpāla has played a great trick upon me.

My lips dance, &c.

BRIDAL SONGS. (NALANGUPATTU).

Song No. 4.

NALUGIDA PILACHE JANAKI NINNU.

Chorus.—*Nalugida pilache Jānakī ninnu*
Nalugida pilache Jānakī ninnu ||

I.

Nalugida-pilachēra-naku-mōhanāngi
Kokola-rāṇi-nalugida-pilache-Jānakī-ninnu ||
Nalugida pilache, &c.

II.

Atturu-parṇim-alulava-janāhama
Ghūmu-ghūmu-rāsana-tōṇa-nēna ||
Nalugida pilache, &c.

III.

Rārē Rukmaṇī-dēśi Rājivam trī
Rārēati-guṇa-sā i Rārē mōhanāngi ||
Nalugida pilache, &c.

IV.

Muddu-kumāra-mukhamudlu bhāvē
poddu pāyana puttisālī nē rāve ||
Nalugida pilache, &c.

V.

Gajyālu, vaijālu, gheḷu ghellani rāvē
Rārē ati guṇa sālī rāvē mōhanāngi ||
Nalugida pilache, &c.

O JANAKI, HE CALLED YOU.

CHORUS.—O Jānakī, he called you to decorate your feet.

O Jānakī, he called you to decorate your feet.

I.

O Jānakī, of captivating limbs. of speech resembling the voice of the *kōkila* (cuckoo). he called you to decorate your feet.

O Jānakī, he called you. &c.

II.

As I was taking 'atar of roses, scented water, sandal and strong scents smelling *ghum ghum*.

O Jānakī, &c.

III.

Come, O Rukmaṇīdēvi. Come, O thou lotus-eyed and sweet-natured. Come, thou of captivating limbs.

O Jānakī, &c.

IV.

Give a kiss on the face of Muddakumāra.¹

Come, O thou intelligent one, it is getting very late.

O Jānakī, &c.

V.

Come, walking slowly, that the small pendants of your anklets and armlets may sound *ghal ghal*. Come, O thou of the sweetest nature, and of captivating body.

O Jānakī, &c.

Song No. 5.

NALANGIDAVAYYA.

Chorus.—*Nalangidarayya Sōi Nanda-kumāra*
Tsūlam yāla Rukmaṇi-to-Satya-Hari-chōra ||

I.

Lalita-nara-Ratna-Kalyāṇa guṇāra.
Chalū rāra chai-to-kūḍi chōḍulu yoduruka ||
Nalangida vayya, &c.

* See above note

¹ The pearl bridegroom, said out of affection.

II.

*Tārūru-taśalalla tavaiṅgi sammētannu,
pūlu surulu jaṭa banduku tsuṭēra ||
Nalaiṅṇiḍa vayya, &c.*

III.

*Nalaiṅṇiḍa rāra nā sāmi voyyāra
Nalaiṅṇuku rāra nā sāmi nātha ||
Nalaiṅṇiḍa vayya, &c.*

IV.

*Ākāsa-mārgamuna-sikhalu Rāmayya Rāma
Nīkulu jaṭalu pulu tsuṭēra ||
Nalaiṅṇiḍa vayya, &c.*

V.

*Parimala ganḍhamulalanu ghumu ghun
vāsana pai salya kādaru ||
Nalaiṅṇiḍa vayya, &c.*

DECORATE MY FEET.

Chorus.—Decorate my feet, O thou son of Nanda. Why should you be shy in sporting with Rukmaṇi? O thou truthful Hari, ever fond of stealthy dalliance.

I.

O thou that art adorned with a fine garland of the nine-valued gems, enough (of your shyness) come knit your hands in your (female) friends' and take your seat in front of me.

Decorate my feet, &c.

II.

Come and decorate me with *tāvaru*, *tasila*, and *tavaiṅgi*. I give my consent. Adorn me also with flowers, *gurul*, *jaṭa* and *banduku*.¹

Decorate my feet, &c.

III.

Come, decorate my feet, my most noble lord. O come decorate my feet, thou lord of my person.

Decorate my feet, &c.

IV.

The peacocks from the path of the sky decorate. O Ramayya, O Rama! with *jaṭa*, flowers and ornaments,

Decorate my feet &c.

V.

Come rub over my body with sweet scents, with sweet things that smell strongly.

Decorate my feet, &c.

Song No. 6.

SRI RAMA JAYA.

I.

*Śrī Rāmā jaya Śite-manōhāra-kārunyasāra-
karuṇā-ni-jaya ||*

II.

Bhāvinchī-chūḍarāma-Vasudēvakī-dēvulanu ||

VICTORY TO RĀMA.

I.

Victory to Rāma, the prosperous, the cap-
titatory of Sītā's heart, the stronghold of mercy,
and the home of generosity.

II.

Be favourable to this son of Vasu and
Dēvaki.²

Song No. 7.

JANDETTIYADANE SRI RAMACHANDRAN.

Chorus.—*Janḍettiyaḍanē Śrī Rāmachan-
dradu ||*

I.

*Pūla Janḍettiyaḍanē mana Chinni-Krish-
ṇadu.*

*Madana-Janḍadu-Mahānu prabhāradu.
Kunḍlu-malya-pūlu-cheṇḍlu-cheta-katti ||*

Janḍettiyaḍane, &c.

II.

Aṇḍa-janḍadu-Janḍaviraṇḍadu.

Kunḍlu-malyapūlu-cheṇḍlu-chēta-katti ||

Janḍettiyaḍane.

SRI RAMACHANDRA TOOK UP THE BALL AND
ROLLED IT.

Chorus.—Śrī Rāmachandra took up the ball
and rolled it. Little Kṛṣṇa took up the
flower ball and played with it.

I.

The awakener of passion the most famous,
took up in his hand the ball made of *kunḍla-
malya* (jessamine) and other flowers.

Śrī Rāmachandra took up, &c.

II.

The creator of the world, the extractor of
respects from others took it up in his hand.

Śrī Rāmachandra took up, &c.

¹ Names of various ornaments.

² Vāsudēva is a name for Kṛṣṇa, and Rāma is here

invoked to grant favour to the newly married bride-
groom, who is compared to Vāsudēva.

Song No. 8.

DASARATHAMAJA-NIKU-PANDAMBU.

Dāsaraṭhā-majja-nīku-paṇḍambu-ḍaṇḍambu
Vīṭṭhī-paṭi-nīku-ṇaṇḍambu
Kausalyasata-nīku-kalupa-kalyāṇambu
Jānakī-paṭi-nīku-jajama-jajama
Anṇa-vayyāni-bhaja-gīṭhī-āt-natala-hi
Nīṭṭhī-annāṅga-maṇḍa-b-ninna-raṅga
Ataḍu-karukku-a-phalanatata-nāvaṣambē
Rāma-āṇḍa-t-Daṣa-ratha-Rāja-ṇaṇḍa ॥

O SON OF DASARATHA. SALUTATION.

O Son of Daśaratha, Salutation! Salutation to thee. O lord of Vīṭṭhī! (Sītā) makes obeisance to thee. O Son of Kausalyā! May there be prosperity to thee: O husband of Jānakī (Sītā). May there be victory to thee. Thus describing and worshipping thee and making thee part of my soul, if I follow the paths of virtue, is there any doubt but that I shall become favoured of thee! O, Rāma, my helper in transgression! O Son of Daśaratha!

Song No. 9.

TAMILANI GUPHILLO.

Tallana-paṭiṣṭhala-palak-ṇaṇḍa-āḍiṇā
Prabalanāṭṭhāṇḍa-pāra-maṭṭhāṇḍa
Paṭṭa-chira-kattī-paṇḍāḍa-kattī
Paṭṭa-pāṇḍa-paṇḍa-āḍiṇā
Ippa-pāṇḍa-saraṇa-ṇaṇḍa-āḍiṇā
T-pāṇḍa-pāṇḍa-pāṇḍa-āḍiṇā
Kaṇḍa-pāṇḍa-pāṇḍa-āḍiṇā
Paṇḍa-pāṇḍa-pāṇḍa-āḍiṇā ॥

IN THE HEELS OF POOR SLAVERS.

In the heels of poor neatherds, the brother of Prabalanāṭṭhā (Kṛṣṇa) sported amorously in the pools of delight. Then your face and I, then, O then elder sister-in-law. He decked the younger sister-in-law with silken cloths and broke her to the. He bade her put on garments ornamented with emeralds. He entangled her in a net of the hands of *oppaṭṭa* flowers. He adorned her nose with the best of pearly rings. He presented her with a fine mat (to sleep on) and remained with her for a very long time.

EPITHALAMIA.

“Open the door” Songs.

(Kalikī Kavatamu).

Song No. 10.

KALIKI KAVATAMU BANDHANA JESINA

I.

Kalikī kavāṭamu bandhana jēsina
kāraṇam eṇḍa Lakṣmī-Nīku-kāra-
ṇam eṇḍa Lakṣmī ॥

II.

Kāraṇam eṇḍa yadigaru nē madi
teliyaga lēḍa vōyi-Svāmī-teliya
ga lēḍa vōyi ॥

III.

Teliy teliyaka Cheṇchitana jēriti pantaṇ
ēṇḍa Lakṣmī-nīku-pantaṇ
ēṇḍa Lakṣmī ॥

IV.

Pāraṇḍa nīku pantaṇḍa eṭiki
paṭṭaṇḍa pōṭṭi, paṭṭaṇḍa pōṭṭi ॥

V.

Cheṇchitayani madi chintana jēsēcu
chinta ēṇḍa Lakṣmī-nīku
chinta ēṇḍa Lakṣmī ॥

VI.

Koṇḍaṇḍa jātī Cheṇchitana nīku
chavitiyāṇḍa chintāṇḍa-nīku
chavī, tiyāṇḍa chintāṇḍa ॥

VII.

Kalikī kavāṭamu derichinapadē i
kaṇḍaṇḍaṇḍa=ittu-ga kaṇḍa
hāṇḍaṇḍa-ittu ॥

VIII.

Kaṇḍaṇḍaṇḍa Cheṇchitakichēchi
Cheṇchitana pāṇḍaṇḍa svāmī-ā-
Cheṇchitana pāṇḍaṇḍa svāmī ॥

FOR YOUR SHUTTING THE DOOR!

I.

For your shutting the doors so very suddenly, what is the reason, O Lakṣmī? What is the reason, O Lakṣmī?

II.

My lord, you ask me the reason: As if your mind was not able to catch at it! As if your mind was not able to catch at it!

III.

Yes, I would know! What though by mistake, I partook of a kiss from the Cheṇchitana woman! Why should you be so very obsti-

¹ Spoke angrily.

nate, O Lakshmi ? Why should you be so very obstinate, O Lakshmi.

IV.

O Divine-souled ! Why should I be obstinate towards you ? You had better not be anxious to enter into my room, my lord ! you had better not be anxious to enter into my room, my lord !

V.

About the Chenchita woman, why should you be so very particular, O Lakshmi ? Why should you be so very particular, O Lakshmi ?

VI.

That low caste Chenchita woman you have made my co-wife, my lord ! You have made my co-wife, my lord !

VII.

If you will open the door soon I will give you this necklace, O Lakshmi ! I will give you this necklace, O Lakshmi !

VIII.

You may give the necklace to the Chenchita woman, and live with her, my lord ! And live with her, my lord !

FOLKLORE IN SOUTHERN INDIA

BY PANDIT NATESA SASTRI, M.F.L.S

XXVI.—*The Conquest of Fate.*

In the Dakṣiṇapadōka there lived a Brāhmaṇ boy who from his childhood was given a very liberal education in Sanskrit. He had read so much in philosophy that before he reached the sixteenth year of his life he began to despise the pleasures of the world. Everything which he saw was an illusion (*mithyā*) to him. So he resolved to renounce the world and to go to a forest, there to meet with some great sage, and pass his days with him in peace and happiness.

Having thus made up his mind, he left his home one day without the knowledge of his parents and travelled towards the Daṇḍakāraṇya. After wandering for a long time in that impenetrable forest, and undergoing all the miseries of a wood inhabited only by wild beasts, he reached the banks of the Tuṅga-bhadra. His sufferings in his wanderings in a forest untrodden by human feet, his loneliness in the midst of wild beasts, his fears whether after all he had not failed in his search for consolation in a preceptor to teach him the higher branches of philosophy, came up one after another before his mind. Dejected and weary, he cast his glance forward as far as it could reach. Was it a reality or only imagination ? He saw before him a lonely cottage of leaves (*parṇasālā*). To a lonely traveller even the appearance of shelter is welcome, so he followed up his vision till it became a reality, and an aged hoary Brāhmaṇ, full fourscore and more in years, welcomed our young philosopher.

"What has brought you here, my child, to this lonely forest thus alone?" spoke in a

sweet voice the hoary lord of the cottage of leaves.

"A thirst for knowledge, so that I may acquire the mastery over the higher branches of philosophy," was the reply of our young adventurer, whose name was Subrahmanya.

"Sit down my child," said the old sage, much pleased that in this Kaliyuga, which is one long epoch of sin, there was at least one young lad who had forsaken his home for philosophy.

Having thus seen our hero safely relieved from falling a prey to the tigers and lions of the Daṇḍakāraṇya, let us enquire into the story of the old sage. In the good old days even of this Kaliyuga learned people, after fully enjoying the world, retired to the forests, with or without their wives, to pass the decline of life in solemn solitude and contemplation. When they went with their wives they were said to undergo the *vānaprastha* stage of family life. The hoary sage of our story was undergoing *vānaprastha*, for he was in the woods with his wife. His name while living was Jñānanidhi. He had built a neat *parṇasālā*, or cottage of leaves, on the banks of the commingled waters of the Tuṅga and Bhadrā and here his days and nights were spent in meditation. Though old in years he retained the full vigour of manhood, the result of a well-spent youth. The life of his later years was most simple and sinless.

"Remote from man, with God he passed his days:

Prayer all his business, all his pleasures praise."

The wood yielded him herbs, fruits and

roots, and the river, proverbial¹ for its sweet waters, supplied him with drink. He lived, in fact, as simply as the bard who sang

"But from the mountain's grassy side

A guiltless feast I bring ;

A bag with herbs and fruits supplied,

And water from the spring."

His faithful wife brought him these, while Jñānanidhi himself devoted his whole time to the contemplation of God.

Such was Jñānanidhi—the abode of all knowledge—to whom the boy-philosopher, Subrahmanya, resorted. After questioning each other both were mightily pleased at the fortune which had brought them together. Jñānanidhi was glad to impart his hard-earned knowledge during his leisure moments to the young student, and Subrahmanya, with that longing which made him renounce the city and take to the woods eagerly swallowed and assimilated whatever was administered to him. He relieved his mother—for such he regarded his master's wife—of all her troubles, and used himself to go out to bring the fruits, herbs and roots necessary for the repasts of the little family. Thus passed five years, by which time our young friend had become learned in the many branches of Āryan philosophy.

Jñānanidhi had a desire to visit the source of the Tuṅgabhadra, but **his wife** was eight months advanced in her pregnancy. So he could not take her; and to take care of her he had to leave behind his disciple, Subrahmanya. Thus, after commending the old lady to **Subrahmanya's care**, and leaving for female assistance another sage's wife, whom he had brought from a distant forest, Jñānanidhi went his way.

The time for confinement was fast approaching, and the old lady even felt the pangs of labour. Her attendant remained with her inside the cottage, while Subrahmanya sat outside anxiously waiting to hear that his master's wife had been safely brought to bed.

Now, there is a strong belief among Hindus that **Brahmā**, the great creator, **writes** on everyone's head at the time of his birth his future **fortunes** in life. He is supposed to do this just at the moment of birth, **when the child leaves the womb** of its mother and

enters the world. Of course, the great God when he enters the room to discharge his onerous duty, is **invisible** to all human eyes. But the eyes of **Subrahmanya** were not exactly human. The supreme knowledge which Jñānanidhi had imparted to him made it easy for him to **discern** at once a **person** entering most impolitely the room in which his master's wife was being confined.

"Let your reverence **stop here**," said the disciple angrily though respectfully. The great God shuddered, for he had been in the habit of entering hourly innumerable buildings on his eternal rounds of duty, but never till then had a human being perceived him and asked him to stop. His wonder knew no measure, and as he stood bewildered the following reprimand fell on his ears: "Hoary **Brahmā** sage (for so **Brahmā** appeared), it is unbecoming your age thus to enter the hut of my master, unallowed by me, who am watching here. My teacher's wife is in labour. Hold your steps."

Brahmā hastily—for the time of inscribing the future fortune on the forehead of the baby to be born was fast approaching—explained to Subrahmanya who he was and what had brought him there. As soon as our young hero came to know the person who stood before him he rose up, and, tying his upper cloth round his hips as a mark of respect, went round the Creator thrice, fell down before **Brahmā's** most holy feet and begged his pardon. **Brahmā** had not much time. He wanted to go in at once, but our young friend **would not leave the God until he explained what he meant to write** on the head of the child. "My son!" said **Brahmā**, "I myself do not know what my iron nail will write on the head of the child. When the child is coming into the world I place the nail on its head, and the instrument writes the fate of the baby in proportion to its good or bad acts in its former life. To delay me is merely wrong. Let me go in."

"Then," said Subrahmanya, "your Holiness must inform me when your Holiness goes out what has been written on the child's head." "Agreed," said **Brahmā** and went in. After a moment he returned, and our young hero at the door asked the God what his nail had written.

¹ *Gāṅgā snāna Tuṅgā pāna*. The Ganges for bath and Tuṅgā (Tuṅgabhadra) for drink

"My child!" said Brahmā, "I will inform you what it wrote; but if you disclose it to anyone **your head will split** into a thousand pieces. The child is a male child. It has before it a very hard life. A buffalo and a sack of grain will be its livelihood. What is to be done? Perhaps it had not done any good acts in its former life, and as the result of its sin then it must undergo miseries now."

"What! Your supreme Holiness, the father of this child is a great sage. And is this the fate reserved to the son of a sage?" wept the true disciple of the sage.

"What have I to do with the matter? The fruits of acts in a former life must be undergone in the present life. But, remember, if you should reveal this news to anyone **your head will split into a thousand pieces.**"

Having said this Brahmā went away, leaving Subrahmanya extremely pained to hear that the son of a great sage was to have a hard life. He could not even open his lips on the subject, for if he did his head would be split. In sorrow he passed some days, when Jñānanidhi returned from his pilgrimage and was delighted to see his wife and the child doing well, and in the learned company of the old sage our young disciple forgot all his sorrow.

Three more years passed away in deep study, and again the old sage wanted to go on a pilgrimage to the sacred source of the Tuṅgabhadra. Again was his wife pregnant, and he had to leave her and his disciple behind with the usual temporary female assistance. Again, too, did Brahmā come at the moment of birth, but found easy admittance as Subrahmanya had now become acquainted with him owing to the previous confinement. Again did Brahmā take an oath from him not to communicate the fortunes of the second child, with the curse that if he broke his oath his head would split into a thousand pieces. This child was a female, and the nail had written that her fate was to be that of a courtesan! She would obtain her living after her attaining maturity by prostitution. Extremely vexed was our young philosopher. The most shameful and sinful life of lives was to be the lot of a daughter of a most holy sage. The thought vexed him to such a degree that language has no words to express it. After worrying a great deal he consoled himself with

the soothing philosophies of the fatalists that **fate alone governs the world.**

The old sage in due course returned, and our young disciple spent two more happy years with him. After a little more than ten years had been thus spent the boy reached to five years and the girl to two. The more they advanced in years the more did the recollection of their future fate pain **Subrahmanya**. So one morning he humbly requested the old sage to permit him to go on a **long journey** to the Himālayas and other mountains, and Jñānanidhi, knowing that all that he knew had been grasped by the young disciple, permitted him with a glad heart to satisfy his curiosity.

Our hero started, and after several years, during which he visited several towns and learned men, reached the Himālayas. There he saw many sages, and lived with them for some time. He did not remain in one place, for his object was more to examine the world. So he went from place to place, and after a long and interesting journey of twenty years he again returned to the banks of the Tuṅgabhadra, at the very place where he lived for ten years and imbibed philosophical knowledge from Jñānanidhi. But he saw there neither Jñānanidhi nor his old wife. They had long since fallen a prey to the lord of death. Much afflicted at heart to see his master and mistress no more, he went to the nearest town, and there after a deal of search he found a **coolie with a single buffalo**. The fate which Brahmā's nail had written on his master's son rushed into the mind of Subrahmanya. He approached the coolie, and, on closely examining him from a distance, our hero found distinct indications of his master's face in the labourer. His pain knew no bounds to see the son of a great sage thus earning his livelihood out of a buffalo. He followed him to his home, and found that he had a wife and two children. One sack of corn he had in his house and no more, from which he took out a portion every day and gave to his wife to be husked. The rice was cooked, and with the petty earnings of a coolie, he and his family kept body and soul together. Each time the corn in the sack became exhausted he used to be able to save enough to replenish it again with corn. Thus did he, according to the writing of Brahmā's nail, pass his days. **Kapāli** was the name of this coolie, the sage's son.

"Do you know me, Kapāli?" said our hero, as he remembered his name.

The coolie was astonished to hear his name so readily pronounced by one who was apparently a stranger to him, but he said, "I am sorry that I do not know you, sir."

Subrahmanya then explained to him who he was and requested him to follow his advice. "My dear son," said he, "Do as I bid you. Early morning to-morrow leave your bed and take to the market your **buffalo and the corn-sack. Dispose of them** for whatever amount they will fetch you. Do not think twice about the matter. Buy all that is necessary for a **sumptuous meal** from the sale-proceeds and eat **it all up** at once without reserving a morsel for the morrow. You will get a great deal more than you can eat in a day. But do not reserve any, even the smallest portion of it. **Feed** several other **Brāhman**s with it. Do not think that I advise you for your ruin. You will see in the end that what your father's disciple tells you is for your own prosperity."

However, whatever the sage might say, Kapāli could not bring himself to believe him. "What shall I do to feed my wife and children to-morrow if I sell everything belonging to me to-day?" Thus thought Kapāli and consulted his wife.

Now she was a very virtuous and intelligent woman. Said she, "My dear lord, we have heard that your father was a great *mahātma*. This disciple must equally be a *mahātma*. His holiness would not advise us to our ruin. Let us follow the sage's advice."

When Kapāli's wife thus supported the sage he resolved to dispose of his beast and sack the next morning, and he did so accordingly. The provisions he bought were enough to feed fifty Brāhman's morning and evening as well as his own family. So that day he fed Brāhman's for the first time in his life. Night came on, and after an adventurous day Kapāli retired to sleep, but sleep he could not. Meanwhile Subrahmanya was sleeping on the bare verandah outside the house, and he came to the sage and said, "Holy sage, nearly half of the night is spent and there are only fifteen *ghatikās* more for the dawn. What shall I do for the morrow for my hungry children? All that I had, I have spent. I have not even a morsel of cold rice for the morning.

Subrahmanya showed him some money that he had in his hand, enough to buy a buffalo and a sack of corn in case the great God did not help him, and asked him to spend that night, at least the remainder of it, in calm sleep. So Kapāli with his heart at ease retired to rest.

He had not slept more than ten *ghatikās* when he dreamt that all his family—his wife and children—were screaming for a mouthful of rice. Suddenly he awoke and cursed his poverty which had always made such thoughts prominent in his mind. There were only five *ghatikās* for the lord of the day to make his appearance in the eastern horizon, and before this could happen he wanted to finish his morning bath and ablutions, and so he went to his garden to bathe at the well. The shed for the buffalo was erected in the garden, and it had been his habit daily before bathing to give fresh straw to his beast. That morning he thought he was spared that duty. But, wonder of wonders! He saw another buffalo standing there. He cursed his poverty again which imagined things impossible. How could it be possible that his beast should be standing there when he had sold it the previous morning? So he went into the shed and found a real buffalo standing there. He could not believe his eyes, and hastily brought a lamp from his house. It was, however, a real buffalo, and beside it was a sack of corn! His heart leapt with joy, and he ran out to tell to his patron, Subrahmanya. But when the latter heard it he said with a disgusted air, "My dear Kapāli, why do you care so much? Why do you feel overjoyed? Take the beast at once with the corn-sack and sell them as you did yesterday."

Kapāli at once obeyed the orders and changed the money into provisions. Again fifty Brāhman's were fed the next day too, and nothing was reserved for the third day's use. Thus it went on in Kapāli's house. Every morning he found a buffalo and a sack of corn, which he sold and fed Brāhman's with the proceeds. In this way a month passed. Said Subrahmanya one day, "My dear Kapāli, I am your holy father's disciple, and I would never advise you to do a thing prejudicial to your welfare. When I came to know that you were the son of the great sage, Jñānanadhi, and were leading so wretched a life, I came to

see you in order to alleviate your miseries. I have now done so, having pointed out the way to you to live comfortably. Daily must you continue thus. Do as you have been doing for the past one month, and never reserve anything, for if you reserve a portion all this happiness may fail, and you will have to revert to your former wretched life. I have done my duty towards you. If you become ambitious of hoarding up money this fortune may desert you."

Kapālī agreed to follow the advice of the sage to the uttermost detail and requested him to remain in his house. Again said Subrahmanya, "My son! I have better work before me than living in your house. So please excuse me. But before leaving you I request you to inform me as to where your sister is. She was a child of two years of age when I saw her twenty years ago. She must be about twenty-two or twenty-three now. Where is she?"

Tears trickled down the eyes of Kapālī when his sister was mentioned. Said he, "Do not, my patron, think of her. She is lost to the world. I am ashamed to think of her. Why should we think of such a wretch at this happy time?"

At once the inscription made by Brahmā's nail rushed into Subrahmanya's mind and he understood what was meant. Said he, "Never mind; be open and tell me where she is."

Then her brother, Kapālī, with his eyes still wet with tears, said that his sister, the daughter of the sage Jñānanidhi, was leading the worst of lives as a *courtezan* in an adjoining village, and that her name was Kalyāṇī.

Subrahmanya took leave of Kapālī and his wife, after blessing his little children and again warning his friend. He had conferred what happiness he could upon his master's son, and now the thought of reforming his master's daughter reigned supreme in his heart. He went at once to the village indicated and reached it at about nightfall. After an easy search he found her house and knocked at the door. The door was at once opened, for Kalyāṇī's profession was such that never did wait for a second knock. But on that day she was astonished to see a face such as she could never expect to approach her house.

"Do you know me, Kalyāṇī?" said Subrah-

manya, and she in reply said that she did not. He then explained who he was, and when she came to know that it was a disciple of her father that was standing before her she wept most bitterly. The thought that, after having been born of such a holy sage, she had adopted so wretched a life, the most shameful in the world, made her miserable at the heart. She fell down at his feet and asked to be forgiven. She then explained to him her extreme misery, and the hard necessity which had compelled her to take to her present way of living. He then consoled her and spoke thus: "My dear daughter! My heart burns to see that necessity drove you to this wretched life. But I can redeem you if you will only follow my advice. From this night you had better shut your door, and never open it to any other person except to him who brings to you a large measure full of pearls of the first water. You follow this advice for a day and I shall then advise you further." Being the daughter of a great sage, and having been compelled by necessity to take to a wretched life, she readily consented to follow the advice of her father's disciple when he promised to redeem her. She bolted the door, and as her customers used to visit her at night, several came that night and knocked. To all she stated from within that her condition was a large measure full of pearls. Her visitors, considering she had gone mad, went away. The night was almost drawing to a close and all her customers had gone away disappointed. Who was there in the village to give to her one measure full of pearls for one night with her? But as the nail of Brahmā had fixed for her such a life as stated, some one was bound to comply with her terms. And as there was no human being who could do so, the God **Brahma** himself assumed the shape of a young man, and, with a measure full of pearls, **visited her** in the last watch of the night and remained with her.

When morning dawned he disappeared, and when Kalyāṇī explained to the disciple of her father the next morning that after all one person had visited her with a measure full of pearls on the previous night he was glad to hear of it. He knew that his suggestion was working well. Said he, "My dear daughter, you are pure hereafter from this day. There

are very few people in this world who could afford to give you a measure full of pearls every night. So, he that brought you the pearls last night must continue to do so every night, and he shall be hereafter your only husband. No other person must ever hereafter see your face, and you must obey my orders. You must sell all the pearls he brings you every day and convert them into money. This money you should spend in feeding the poor and other charities. None of it must you reserve for the next day, neither must you entertain a desire to hoard up money. The day you fail to follow my advice you will lose your husband, and then you will have to fall back on your former wretched life."

Thus said Subrahmanya, and Kalyāñi agreed to strictly follow his injunctions. He then went to live under a tree opposite to her house for a month to see whether his plan was working well, and found it worked admirably.

Thus, after having conferred happiness, to the best of his abilities, on the son and daughter of his former master, Subrahmanya took leave of Kalyāñi, and with her permission, most reluctantly given, he pursued his pilgrimage.

One moonlight night, after a long sleep, Subrahmanya rose up almost at midnight, and

hearing the crows crowing he mistook it for the dawn and commenced his journey. He had not proceeded far, when on his way he met a beautiful person coming before him with a sack of corn on his head and a bundle of pearls tied up in the end of his upper cloth on his shoulder, leading a buffalo before him.

"Who are you, sir, walking thus in this forest?" said Subrahmanya.

When thus addressed the person before him threw down the sack and wept most bitterly. "See, sir, my head is almost become bald by having to bear to Kapāl's house a sack of corn every night. This buffalo I had to Kapāl's shed, and this bundle of pearls I take to Kalyāñi's house. My nail wrote then fate on their respective heads, and by your device I have to supply them with what my nail wrote. When will you relieve me of these troubles?"

Thus wept Brahmā, for it was no other personage. He was the Creator and Protector of all beings, and when Subrahmanya had pointed out the way for his master's children and they had conquered fate, Brahmā too was conquered. So the great God soon gave them eternal felicity and relieved himself of his troubles.

MISCELLANEA.

CALCULATIONS OF HINDU DATES

No. 15.

In the Halst stone inscription of the Kadamba kings Permāñi-Sivachitta, and Vajayiditya-Vishnuchitta, from the Belgaum District, published by me¹ in the *Jour. B. R. A. Soc.* Vol. IX. pp. 262, 278 ff., the first date line is—*samvratte Kalebāle kha-sapa-dā-payāñdhau pratardhamāne tad-rājyē trayas-* Virōdhin samvatsarē Suchan mase dāse vāse Vṛhaspatyē d kṣīṇiyāvasanāñdhau. "Under their reign, in the Kalebāle, the great tree is sheltered by the tree, in the name of the year, the year of the Virōdhin, in the month of Suchan, on the new moon day, on the day of Vṛhaspatyā, the sun is in the constellation of the star, in the progress to the south." And the inscription

goes on to record a grant of the village of Sindavalli by Permāñi-Sivachitta, in this the twenty-third year of their joint reign.

This gives us, as the basis of the calculation, Kalyuga-Samvat 1270 expired, which by the Tables is equivalent to Śaka-Samvat 1091 expired, and the details of the Virōdhin samvatsara, current, of the Sixty-Year Cycle of Jupiter, the month Suchan, which, from the *atthabhi*, that is mentioned, denotes Vṛhaspatyā, ordaining, from July, the dark-fortnight, the day was on the Vṛhaspatyā, or Thursday, and the constellation, which we have taken as being ruled by the Karka-Samkranti or entrance of the sun into Cancer.

By the Southern Cycle of the Cycle, derived from the locality and period of the eclipses of course the system that prevails to apply the Virōdhin samvatsara, or conjunction with the

¹ *Journal of the Asiatic Society of Bengal*, vol. ix. pt. ii. p. 262, No. 42.

² In Monier-Williams' Sanskrit Dictionary, Suchan is

given a term, not a month, and the reason including the two months Jy. and Ās. is

indicated current year, Kaliyuga-Samvat 4271, equivalent to Śaka-Samvat 1092 (A. D. 1169-70). And, with the basis of Śaka-Samvat 1091 expired, from Prof. K. L. Chhatre's Tables I find that, by the *Amānta* southern arrangement of the lunar fortnights, which is of course the arrangement that is required by the locality and period of the record, the given tithi, Āṣāḍha kṛishṇa 15, ended, as required, on Thursday, the 26th June, A. D. 1169, at about 28 *gh.* 16 *palas*, after mean sunrise (for Bombay); and the Karka-Samkrānti occurred on the same day, at about 27 *gh.* 40 *p.*

No. 16.

In the same Halsi stone inscription, the second date (line 31f. is — samivratte Kadeh kāla śva³-sapta-dvi-payōnidhau pravardhamāne tad-rājyē pañchavinśe samē Khare Māghē cha śud-dha-dvādaśyām māse vāre Vrihaspatē samprāptē Vaidhritau yōgē,— when there has expired, in the Kali era, (the year that is numbered by) the Āsvins (two), (the numeral) seven, (the numeral) two, and the oceans (four); in the augmenting Khara (*samvatsara*), which is the twenty-fifth year in his reign, and in the month Māgha; on the twelfth *tithi* of the bright fortnight: on the day of Vrihaspati; when the Vaidhriti *yōga* has arrived." And the inscription goes on to record a grant of some lands at the village of Bhalka or Bhalkā by Vijayāditya-Vishnuchitta or Vijayāditya II., in this the twenty-fifth year of the joint reign of him and his elder brother Permaḍi-Sivachitta.

This gives us, as the basis of the calculation, Kaliyuga-Samvat 4272 expired, which by the Tables is equivalent to Śaka-Samvat 1093 expired; and the details of the Khara samvatsara, current, of the Sixty-Year Cycle: the month Māgha (ordinarily January-February); the bright fortnight; the twelfth *tithi*, Vrihaspativāra, or Thursday; and the Vaidhriti yōga.

By the Southern System of the Cycle, the Khara samvatsara did coincide with the indicated current year, Kaliyuga-Samvat 4273, equivalent to Śaka-Samvat 1094 A. D. 1171-72. But, with the basis of Śaka-Samvat 1093 expired, I find that the given *tithi*, Māgha sukla 12, ended, not on a Thursday, but on Sunday, the 9th January, A. D. 1172, at about 50 *gh.* 21 *p.* after mean sunrise (for Bombay). And it is evident, therefore, that there must be some mistake in this record; unless the record itself is spurious.

for which assumption, however, there are no *prima-facie* grounds whatever.

Now, the given *tithi*, while still belonging to the twenty-fifth regnal year, might fall in either the preceding or the following Kaliyuga (or Śaka) year; though, to meet either of these two cases, we should have to take a considerable liberty with the text, in altering the name of the *samvatsara* itself, as well as in making a change in the number of the Kaliyuga year. A correct result, however, cannot be obtained in this way. For, in the preceding year, with the basis of Śaka-Samvat 1092 expired, the given *tithi*, Māgha sukla 12, ended on Wednesday, the 29th January, A. D. 1171, at about 12 *gh.* 50 *p.*, with no possibility of the Thursday being deduced from any other Tables. And, in the following year, with the basis of Śaka-Samvat 1091 expired, the given *tithi*, Māgha sukla 12, ended on Saturday, the 27th January, A. D. 1173, at about 37 *gh.* 5 *p.*

The next idea that occurs, is, that the mistake is in respect of the name of the month; and that, instead of *Māghē*, we should have *Mārgē*, "in (the month) Mārga" (ordinarily November-December). And this seems to be the real state of the case. For, with the basis of Śaka-Samvat 1093 expired, the given tithi, taken as Mārgasirsha sukla 12, ended, as required, on Thursday, the 11th November, A. D. 1171, at about 15 *gh.* 17 *p.* This, therefore, is probably the date that was intended. And it is easy to see that the composer of the record may have been compelled, by metrical exigencies, to use the locative case of the rather unusual abbreviation *Mārga*, unusual at least in Southern India; and that, in the writing of the record on the stone, possibly from dictation, *Mārgē* may have been carelessly changed into *Māghē*. I should state, however, that Mr. Sh. B. Dikshit informs me that the Vaidhriti *yōga* can never occur on Mārgasirsha sukla 12, and that it did occur on Māgha sukla 12 in A. D. 1172, on Sunday, the 9th January. His suggestion is that, in the text, which is perfectly legible and free from doubt, *Vrihaspatē* should be altered into any such word as *te śuklapatē*, which would give "on the day of the sun," or "on Sunday." But I do not see my way to accepting this alteration of the text. And, on the strength of Prof. Jacob's remarks about the *math.* tables of page 156-57 above, I do not think that the non-occurrence of the given *tithi* is necessarily fatal to accepting Thursday, the 11th November, A. D.

³ Read *kālī śaka*.—When I published this inscription, I read here *kālī śaka*, and thought that the composer of this part of the record had carelessly copied the word expressing the year in the first date, without noticing that two years had elapsed since then. But I find now that the *ś* of *kālī* was not engraved, and that the *ś* of

following *śaka* was not fully engraved, so that the record is *kālī śaka*, as well as the number of the record year shows that it should be the third year west of 1094. And the most probable emendation is *śaka* 1094.

1171, as the real English equivalent. This date, however, is one that might advantageously be subjected to further examination.

No. 17

In the Dēgāmve stone inscription of the Kādamba king Permāḍi-Sivachitta, from the Belgaum District, published by me in the *Jour. Bo. Br. R. As. Soc.* Vol. IX, pp. 262, 264ff., 287ff., the date (line 33f. in the version in Nāgarī characters, and line 42ff. in the version in Old-Kanarese characters) is — p. ūchasaptaty-adhika-dviṣat-ōttara-chatuh-sahasrēshu Kaliyuga-samvatsarēshu parāvriddhēshu pravartamānē cha Śrī-Kādamba-Sivachitta-Vira-Permāḍidēvasya pravardhamāna-vijaya-rājya-samvatsarē ashtāvinṣe Jay-ābhavē Mārgasīrṣhē amāvāsyaṁ Bhaumavāre sūryagrahana-parvati, — “when there have expired four thousand years of the Kaliyuga, increased by two hundred raised by seventy-five; and while there is current the twenty-eighth year, having the appellation of Jaya, of the augmenting victorious reign of the glorious Kādamba Sivachitta-Vira-Permāḍidēva; in (the month) Mārgasīrsha; on the new-moon *tithi*; on Tuesday; at the conjunction of an eclipse of the sun.” And the inscription goes on to record a grant of the village of Dēgāmve by Permāḍidēva’s chief queen, Kamalādevī, in this twenty-eighth year of his reign.

This gives us, as the basis of the calculation, Kaliyuga-Samvat 4275 expired, which by the Tables is equivalent to Śaka-Samvat 1096 expired; and the details of the Jaya samvatsara, current, of the Sixty-Year Cycle; the month Mārgasīrsha (ordinarily November-December); the new-moon *tithi*, i.e. the fifteenth *tithi* of the dark fortnight; Bhaumavāra, or Tuesday; and an eclipse of the sun.

By the Southern System of the Cycle, the Jaya samvatsara did coincide with the indicated current year, Kaliyuga-Samvat 4276, equivalent to Śaka-Samvat 1097 (A.D. 1174-75). And with the basis of Śaka-Samvat 1096 expired, and by the *Amānta* southern arrangement, I find that the given *tithi*, Mārgasīrsha *krishṇa* 15, ended, as required, on Tuesday, the 26th November, A.D. 1174, at about 13 *ghatis*, 12 *palas*, after mean sunrise (for Bombay); and on this day there was an eclipse of the sun,* which was visible in India.

J. F. FLEET.

CATALOGUE OF COINS OF SOUTHERN INDIA

We have received a very interesting circular, signed by Messrs. Sewell, Thurston, and Tufnell,

names well known in all matters connected with antiquarian and archæological studies in Madras, designed to promote the “systematic cataloguing of private collections of the ancient coins of South India.”

“Private collectors,” of course, vary, from the learned numismatist, who has made coins the study of the leisure of a lifetime, to the gentleman who collects coins as he collects everything else that is curious and that comes within his reach. Such dilettante antiquarians as this last are much more common than many suppose, and much more frequent than might be expected. They possess treasures of the real value of which they have no conception. If the gentlemen above-mentioned can manage to get the collections of such persons sufficiently within their grasp to be able to catalogue and publish them, they will have conferred a real benefit on numismatology.

The dilettante collector may be properly styled an enemy to coins; but coins have, widely spread all over India, much worse foes. We mean those ladies and gentlemen who delight in wearing “funny old coins” as personal adornments. In this Journal (*ante*, Vol. XIV, p. 325) there has been published a coin found on a sleeve-link (!); and the present writer on one occasion discovered a valuable coin on a watch-chain. However, try as they may, it is to be feared that the promoters of the scheme under consideration will succeed in capturing but very few of this class of “collector!”

Messrs. Sewell, Thurston, and Tufnell, have set about their business in a thoroughly systematic manner, and have accompanied their appeal to collectors of coins by an intelligible and simple form to fill in, together with a very practical paper of “instructions,” from which we take the following easy method of taking a rough rubbing:—“Circular holes a little larger than the coin should be cut in strong cardboard. A piece of strong thin paper should then be placed over the coin and pressed down tight by means of the card. The paper should then be gently rubbed with a hard blacklead pencil, *not cut to a point*, but just rounded off.”

The only point in the scheme that we would deprecate being carried out, is the proposal to start a new periodical devoted to this work. There are plenty of widely circulated magazines and journals of Societies in existence already, that would gladly publish whatever the promoters might send them as the result of their efforts. Indeed, so great are the calls on the purses of the scientific men of the day in the matter of

* See von Oppolzer's *Canon der Finsternisse*, pp. 228, 229, and Plate 114.

subscriptions to periodicals and Societies connected with their studies, that the best of them are loth to add to the already too long list. So that, unless a scientific subject is sufficiently wide in its scope to demand a journal to itself, the danger of starting a new journal is that its circulation will be very small and fail to reach those who would make the best use of its contents. It is, we submit, better for the South-Indian numismatists to use the pages of any established and widely circulated journal they may think best suited to them, than to start a journal of their own.

With this one criticism, we have much pleasure in giving the scheme our welcome and heartiest support.

WHALE AND AL-UWAL.

I have no reason to suppose that the usual derivation of the word **whale** from the Anglo-Saxon *hwæl* is incorrect; but the word used for this animal by the old Arab traveller, Mas'ûdî (A.D. 1001-1003), in his *Measures of Gold and Mines of Gems*, is curiously similar, and I do not think that attention has previously been drawn to it. The following is a translation of one of the passages in which it occurs:—

"There is a fish in this sea called al-Uwâl ^{الأول} (whale), which is from four to five hundred *Umwâl* cubits ^{الذراع العربي} long; these are the cubits in use in this sea (the Sea of Zang ^{بحر الزنج}). The usual length of this fish is one hundred ^{بإع} fathoms (?). Frequently when it swims through the sea only the extremities of the two fins are to be seen, and it looks like the sail of a ship. Generally the head of the whale is out of water, and when it powerfully ejects water it gushes into the air more than one bowshot high. The vessels are afraid of it by day and night, and they beat drums ^{دباب} (dabâdab) and wooden poles to drive it away. This fish drives with its tail and ins other fish into its open mouth, and they pass down its throat with the stream of water. When the whale sins God sends a fish about one cubit long, called *ash-Shak* ^(الشك); it adheres to the root of its tail, and the whale has no means to make itself free from it. It goes therefore to the bottom of the sea and beats itself to death; its dead body floats on the water and looks like a great mountain. The fish called *ash-Shak* adheres frequently to the whale. The whales, notwithstanding their size, do not approach vessels, and they

take flight when they see this little fish, for it is their destruction."

A little farther on the author mentions an island called "Whale Island" (^{جزيرة ارال}), but I am unable to identify it.

The word *dabâdab*, used for a drum in the above passage, corresponds to the Old English "dub-a-dub," to beat a drum. Also, the blow on the drum, "The dub-a-dub of her an"—"Rum-a-dub" and dub-a-dub the drummer beats away.

As this word probably owes its origin to an imitative sound, the similarity even in two widely different languages is not surprising.

J. S. KING.

TABSERI-FU-ANAM.

This work, the full title of which is ^{تبصرة العوام} *تبصرة العوام في معرفة معتات الأنام* has been lithographed for the first time in Persia, at Téhérân, and bears A.H. 1301 in the colophon as the date of publication. It is sold bound up with the *Qisas-ul-Umam* of Muḥammed ben Sulaimân Tenekbûm, and is an Exposition of the principal Creeds of the East. Its author, a zealous Shî'ah, is Sayyid Murtezâ, styled 'Aleml-Huda. In a MS. copy which once passed through my hands the author was called Murtezâ Râzî-ul-Husâ'î. The *Qisas-ul-Umam* which precedes it contains (page 311) a notice of Sayyid Murtezâ ul-Dâ'ir-Râzî-ul-Husâ'î, and it makes him out to be the author of the *Tabserah*. At the same time it gives an anecdote of his relations with Abû Muḥammed ben Muḥammed al-Ghazâfî-Fârûsî, born A.H. 129, died A.H. 595, whilst Sayyid Murtezâ in his own work, in the chapter on the doctrines of the second sect of Islâm, those who call themselves Shî'ahs (page 65, line 27 of the edition under notice), mentions that Fakhr Râzî was of his times—that is to say modern in comparison with himself. Fakhr Râzî died A.H. 606.

Besides the present work, Sayyid Murtezâ translated a genealogy of some of the Imâms from the Arabic, a work written after A.H. 653, and entitled *Ausâb Nâmah*.

The *Tabserah* is divided into the following twenty-six *bîbs*:—(1) On the doctrines of the philosophers. (2) Tenets of the Magi. (3) Tenets of the Jews, etc. (4) The doctrines of the different sects of Islâm. (5) On the Khavârij. (6) On the Mu'tazilêh. (7) On the sect founded by Jahûr ben Safrân. (8) On the Murjî sect. (9) On the Najjârî sect. (10) On the Karâmî sect. (11) On the Mushabî sect. (12) On those who

believe in the transmigration of souls. (13) On the doctrines of the Sunnis. (14) On the doctrines of the Malekî and Shâfi'î sects. (15) On the sect founded by Ibn Kalb. (16) On Sûfis. (17) On the doctrines of the Qushairî. (18) Tenets of the Sunnis with regard to the *anbujâ*. (19) Doctrines of the Shî'ahs. (20) On the discrimination of the true from the spurious. (21) On the Imâmîyeh. (22) On the story of the Bâgh-i-Falek. (23) On certain *Hadîs*. (24) On the wrong doings of the B. ni Umayyeh. (25) Anecdotes regarding the followers of justice and predestination. (26) On some of the tenets of the Imâmîyeh.

S. J. A. C.

A TABLE FOR THE ABDAPA TITHI-SUDDHI,
AND TITHI-KĒNDRA.

In using Prof. K. L. Chhatre's Tables for calculating the week-days, ending-times, and English dates, of Hindu tithis,¹ some inconvenience is entailed by the number of the quantities that have to be taken, at starting, from his Table I. For instance, in calculating a date with the basis of Śāka-Samvat 1134 expired, we have to take out, under the three columns of the *Abdapa*, the *Tithi-suddhi*, and the *Tithi-kēndra*, the quantities for the years 0, 1000, 100, 30, and 4, —or altogether fifteen sets of figures,—and also to work out from Table II, by proportion, the correction in the *Tithi-suddhi* and the *Tithi-kēndra*, before the operation is started by addition in their respective columns, of all the quantities thus obtained.

The object of the accompanying Table for the *Abdapa*, *Tithi-suddhi*, and *Tithi-kēndra*, is to simplify this part of the work. The quantities given in it are all complete, including the *Abdapa* or additive quantities for Śāka-Samvat expired. And, in working, for instance, with the expired year quoted above, all that is necessary is to take out, from the body of the Table, the quantities for the year 1130, with the corrections for the same year (214 *p.*, and 1 *gh* 14 *p.*) as being a sufficiently close approximation, and to add the difference for 4 years from the subsidiary Table at the bottom of the Table.

One revolution of the moon's *kēndra* is contained in 27 *tithis*, 59 *ghatis*, and 3336 *palas*. But, to save trouble on the part of the calculator, it is taken to contain 28 *tithis*, in adding the quantities for the *Tithi-kēndra* for the several component parts of a given Śāka year,² no sensible error being

introduced thereby in the ultimate results. In preparing the Tables, however, one revolution of the *kēndra* is taken to contain, not 28, but the correct number, viz. 27 *ti* 59 *gh* 3336 *p.* Thus, for example, the variation in the *Tithi-kēndra* for 4 years is given (7 *ti*, 9 *gh*, 421 *p.* \times 4 = 27 *ti*, 59 *gh* 3333 *p.* =) 0 *ti*, 39 *gh* 15 *p.* (see Kālasādhana Table I p. 19, last column) and, in preparing the accompanying Table, I have thought it desirable to follow the correct way. Thus, the *Tithi-kēndra* for Śāka-Samvat 1150 expired is 2 *ti*, 57 *gh* 16 *p.* in my Table, while, by adding the quantities for the Śāka years 0, 1000, 100, and 50, and taking the remainder over the multiple of 28, it would have been 2 *ti* 55 *gh* 56 *p.* Accordingly, the figures of the *Tithi-kēndra* in my Table will differ a little from those that would be obtained from Prof. Chhatre's Tables; but the change is, it must have been seen, on the correct side. And the ultimate results worked out from my Table will sometimes be more correct than those obtained from Prof. Chhatre's Tables by about seven *palas*.

There is another point of difference. The correction in the *Tithi-suddhi* and *Tithi-kēndra* given in Prof. Chhatre's Kālasādhana Table II, p. 12, is too vague, being for the interval of each thousand years. This Table II is based on the correction in the moon's mean longitude and mean anomaly given in Table IV, p. 89,³ in which that correction is given for the interval of each hundred years. It is evident, therefore, that the correction in the *Tithi-suddhi* and *Tithi-kēndra*, calculated from the figures in Table IV, p. 89, will be more accurate. I calculated it accordingly, and have given it in the accompanying Table. This correction becomes nil in Śāka-Samvat 1622 expired; and in other years from Śāka-Samvat 1506 to 1700 expired, it is less than one *pala* with respect to the *Tithi-suddhi*, and less than five *palas* in the *Tithi-kēndra*, the latter causing a difference of half a *pala* at the utmost in the ultimate results. The correction for these years, therefore, is neglected in the accompanying Table.

The present Table, thus prepared from the details in Prof. K. L. Chhatre's Table I, with the modifications explained above, extends from Śāka-Samvat 0 to 1620, both expired. Table VII in his book gives the required quantities for every year from Śāka-Samvat 1700 to 1800, both expired. And the two Tables together will render it quick work to calculate any date in the first eighteen centuries of the Śāka era.

SH. B. DIKSHIT

¹ *Pratyaśādhana Kshetras*, pp. 10 to 30. Kālasādhana Table I, to XI.

² See *ante*, Vol. XVI, p. 115, col. 2 and p. 116, col. 2.

³ See *ante*, Vol. XVI, p. 116, col. 2.

TABLE FOR THE ABDAPA, TITHI-SUDDHI, AND TITHI-KENDRA.

| Expired Saka. | Abdapa. | | | Tithi-suddhi | | | Tithi-kendra | | | Expired Saka. | Abdapa | | | Tithi-suddhi. | | | Tithi-kendra | | |
|------------------|---------|-----|------|--------------|------|------|--------------|-----|----|------------------|--------|-----|------|---------------|------|------|--------------|-----|----|
| | va. | gh. | p. | ti. | gh. | p. | ti. | gh. | p. | | va. | gh. | p. | ti. | gh. | p. | ti. | gh. | p. |
| 0 | 1 | 10 | 10.0 | 12 | 45 | 14.0 | 24 | 52 | 50 | 200 | 0 | 55 | 14.7 | 5 | 43 | 8.6 | 1 | 35 | 39 |
| | | | | 3 | 38.5 | | 13 | 32 | | | | | | 2 | 49.0 | | 10 | 30 | |
| 10 | 6 | 45 | 25.2 | 3 | 24 | 7.7 | 12 | 31 | 9 | 210 | 6 | 30 | 29.9 | 26 | 22 | 2.3 | 17 | 13 | 31 |
| | | | | 3 | 35.9 | | 13 | 23 | | | | | | 2 | 46.8 | | 10 | 22 | |
| 20 | 5 | 20 | 40.5 | 24 | 3 | 1.5 | 0 | 9 | 28 | 220 | 5 | 5 | 45.2 | 17 | 0 | 56.1 | 4 | 51 | 51 |
| | | | | 3 | 33.3 | | 13 | 13 | | | | | | 2 | 44.5 | | 10 | 13 | |
| 30 | 3 | 55 | 55.7 | 14 | 41 | 55.2 | 15 | 47 | 21 | 230 | 3 | 41 | 0.4 | 7 | 39 | 49.8 | 20 | 29 | 43 |
| | | | | 3 | 30.7 | | 13 | 4 | | | | | | 2 | 42.3 | | 10 | 5 | |
| 40 | 2 | 31 | 10.9 | 5 | 20 | 48.9 | 3 | 25 | 40 | 240 | 2 | 16 | 15.6 | 28 | 18 | 43.5 | 8 | 8 | 2 |
| | | | | 3 | 25.1 | | 12 | 55 | | | | | | 2 | 49.0 | | 9 | 56 | |
| 50 | 1 | 6 | 26.2 | 25 | 59 | 42.7 | 19 | 3 | 32 | 250 | 0 | 51 | 36.9 | 18 | 57 | 37.3 | 23 | 45 | 55 |
| | | | | 3 | 25.5 | | 12 | 45 | | | | | | 2 | 37.8 | | 9 | 48 | |
| 60 | 6 | 41 | 41.4 | 16 | 38 | 36.4 | 6 | 41 | 51 | 260 | 6 | 26 | 46.1 | 9 | 36 | 31.0 | 11 | 24 | 13 |
| | | | | 3 | 22.9 | | 12 | 36 | | | | | | 2 | 35.5 | | 9 | 40 | |
| 70 | 5 | 16 | 56.6 | 7 | 17 | 30.1 | 22 | 19 | 44 | 270 | 5 | 2 | 1.3 | 0 | 15 | 24.7 | 27 | 2 | 6 |
| | | | | 3 | 20.3 | | 12 | 27 | | | | | | 2 | 33.3 | | 9 | 31 | |
| 80 | 3 | 52 | 11.9 | 27 | 56 | 23.8 | 9 | 58 | 3 | 280 | 3 | 37 | 16.6 | 20 | 54 | 18.4 | 14 | 40 | 25 |
| | | | | 3 | 17.7 | | 12 | 18 | | | | | | 2 | 31.0 | | 9 | 23 | |
| 90 | 2 | 27 | 27.1 | 18 | 35 | 17.6 | 25 | 35 | 55 | 290 | 2 | 12 | 31.8 | 11 | 33 | 12.2 | 2 | 18 | 44 |
| | | | | 3 | 15.1 | | 12 | 8 | | | | | | 2 | 28.8 | | 9 | 14 | |
| 100 | 1 | 2 | 42.3 | 9 | 14 | 11.3 | 13 | 14 | 15 | 300 | 0 | 47 | 47.0 | 2 | 12 | 5.9 | 17 | 56 | 37 |
| | | | | 3 | 12.5 | | 11 | 59 | | | | | | 2 | 26.5 | | 9 | 6 | |
| 110 | 6 | 37 | 57.5 | 29 | 53 | 5.0 | 0 | 52 | 34 | 310 | 6 | 23 | 2.2 | 22 | 50 | 59.6 | 5 | 34 | 50 |
| | | | | 3 | 10.2 | | 11 | 50 | | | | | | 2 | 24.4 | | 8 | 58 | |
| 120 | 5 | 13 | 12.8 | 20 | 31 | 58.8 | 16 | 30 | 27 | 320 | 4 | 58 | 17.5 | 13 | 29 | 53.4 | 21 | 12 | 49 |
| | | | | 3 | 7.8 | | 11 | 41 | | | | | | 2 | 22.2 | | 8 | 50 | |
| 130 | 3 | 48 | 28.0 | 11 | 10 | 52.5 | 4 | 8 | 46 | 330 | 3 | 33 | 32.7 | 4 | 8 | 47.1 | 3 | 51 | 8 |
| | | | | 3 | 5.5 | | 11 | 32 | | | | | | 2 | 20.1 | | 8 | 42 | |
| 140 | 2 | 23 | 43.2 | 1 | 49 | 46.2 | 19 | 46 | 38 | 340 | 2 | 8 | 47.9 | 24 | 17 | 40.8 | 24 | 20 | 6 |
| | | | | 3 | 3.1 | | 11 | 23 | | | | | | 2 | 17.9 | | 8 | 34 | |
| 150 | 0 | 58 | 58.5 | 22 | 28 | 40.0 | 7 | 24 | 57 | 350 | 0 | 44 | 3.2 | 15 | 26 | 34.6 | 12 | 7 | 19 |
| | | | | 3 | 0.8 | | 11 | 14 | | | | | | 2 | 15.8 | | 8 | 26 | |
| 160 | 6 | 34 | 13.7 | 13 | 7 | 33.7 | 23 | 2 | 50 | 360 | 6 | 19 | 18.4 | 6 | 5 | 28.3 | 27 | 45 | 12 |
| | | | | 2 | 58.4 | | 11 | 6 | | | | | | 2 | 13.6 | | 8 | 19 | |
| 170 | 5 | 9 | 28.9 | 3 | 46 | 27.4 | 10 | 41 | 9 | 370 | 4 | 54 | 33.6 | 26 | 44 | 22.0 | 15 | 23 | 31 |
| | | | | 2 | 56.1 | | 10 | 57 | | | | | | 2 | 11.5 | | 8 | 11 | |
| 180 | 3 | 44 | 44.2 | 24 | 25 | 21.1 | 26 | 19 | 1 | 380 | 3 | 29 | 48.9 | 17 | 23 | 15.7 | 3 | 1 | 50 |
| | | | | 2 | 53.7 | | 10 | 48 | | | | | | 2 | 9.3 | | 8 | 5 | |
| 190 | 2 | 19 | 59.4 | 15 | 4 | 14.9 | 13 | 57 | 20 | 390 | 2 | 5 | 4.1 | 8 | 2 | 9.5 | 18 | 39 | 42 |
| | | | | 2 | 51.4 | | 10 | 39 | | | | | | 2 | 7.2 | | 7 | 55 | |

DIFFERENCE FOR INTERMEDIATE YEARS.

| | | | | | | | | | | | | | | | | | | | |
|---|---|----|------|----|----|------|----|----|----|-----|---|----|------|----|----|------|----|----|-----|
| 1 | 1 | 15 | 31.5 | 11 | 3 | 53.4 | 7 | 9 | 42 | 6 | 0 | 53 | 9.1 | 6 | 23 | 20.2 | 14 | 58 | 39 |
| 2 | 2 | 31 | 3.0 | 22 | 7 | 16.7 | 14 | 19 | 24 | 7 | 1 | 48 | 40.7 | 17 | 27 | 13.6 | 22 | 8 | 21 |
| 3 | 3 | 46 | 34.6 | 3 | 11 | 40.1 | 21 | 29 | 6 | 8 | 3 | 4 | 12.2 | 28 | 31 | 6.9 | 1 | 18 | 29 |
| 4 | 5 | 2 | 6.1 | 14 | 15 | 33.5 | 0 | 39 | 15 | 9 | 4 | 19 | 43.7 | 9 | 35 | 0.3 | 8 | 28 | 11 |
| 5 | 6 | 17 | 37.6 | 25 | 19 | 26.8 | 7 | 48 | 57 | [10 | 5 | 35 | 15.2 | 29 | 38 | 53.7 | 15 | 37 | 52] |

CONTINUATION OF TABLE FOR THE ABDAPA, TITHI-SUDDHI, & TITHI-KENDRA

| Expired Saka | Abdapa | | | Tithi-suddhi. | | | Tithi-kendra. | | | Expired Saka | Abdapa. | | | Tithi-Suddhi. | | | Tithi-kendra | | |
|-----------------|--------|----|------|---------------|-----|------|---------------|-----|----|-----------------|---------|----|------|---------------|-----|------|--------------|-----|----|
| | va | gh | p. | ti. | gh. | p. | ti. | gh. | p. | | va | gh | p. | ti. | gh. | p. | ti. | gh. | p. |
| 400 | 0 | 40 | 19.3 | 28 | 41 | 3.2 | 6 | 18 | 2 | 600 | 0 | 25 | 21.0 | 21 | 38 | 57.7 | 11 | 6 | 23 |
| | | | | | 2 | 5.0 | | 7 | 17 | | | | | | 1 | 28.5 | | 5 | 31 |
| 410 | 6 | 15 | 34.5 | 19 | 19 | 56.9 | 21 | 55 | 51 | 610 | 6 | 0 | 39.2 | 12 | 17 | 51.4 | 26 | 38 | 16 |
| | | | | | 2 | 3.1 | | 7 | 10 | | | | | | 1 | 26.9 | | 5 | 25 |
| 420 | 4 | 50 | 49.8 | 9 | 58 | 50.7 | 9 | 34 | 14 | 620 | 1 | 35 | 54.5 | 2 | 56 | 15.2 | 14 | 16 | 35 |
| | | | | | 2 | 1.2 | | 7 | 33 | | | | | | 1 | 25.2 | | 5 | 19 |
| 430 | 3 | 26 | 5.0 | 0 | 37 | 44.4 | 25 | 12 | 6 | 630 | 3 | 11 | 9.7 | 23 | 35 | 58.9 | 1 | 54 | 27 |
| | | | | | 1 | 59.3 | | 7 | 26 | | | | | | 1 | 13.6 | | 5 | 13 |
| 440 | 2 | 1 | 26.2 | 21 | 16 | 38.1 | 12 | 50 | 25 | 640 | 1 | 46 | 24.9 | 14 | 14 | 52.6 | 17 | 32 | 46 |
| | | | | | 1 | 57.4 | | 7 | 19 | | | | | | 1 | 21.9 | | 5 | 7 |
| 450 | 0 | 36 | 35.5 | 11 | 55 | 31.9 | 0 | 28 | 44 | 650 | 0 | 21 | 40.2 | 4 | 53 | 26.4 | 5 | 11 | 6 |
| | | | | | 1 | 55.5 | | 7 | 12 | | | | | | 1 | 26.3 | | 5 | 1 |
| 460 | 6 | 11 | 59.7 | 2 | 34 | 25.6 | 16 | 6 | 37 | 660 | 5 | 56 | 55.4 | 25 | 52 | 26.1 | 20 | 45 | 58 |
| | | | | | 1 | 53.6 | | 7 | 5 | | | | | | 1 | 18.6 | | 4 | 55 |
| 470 | 4 | 17 | 5.9 | 23 | 13 | 19.3 | 3 | 14 | 56 | 670 | 4 | 32 | 16.6 | 16 | 11 | 13.5 | 8 | 27 | 18 |
| | | | | | 1 | 51.7 | | 6 | 38 | | | | | | 1 | 17.6 | | 4 | 19 |
| 480 | 3 | 22 | 21.2 | 13 | 52 | 13.9 | 19 | 22 | 15 | 680 | 3 | 7 | 25.9 | 6 | 50 | 7.5 | 24 | 5 | 9 |
| | | | | | 1 | 19.8 | | 6 | 51 | | | | | | 1 | 15.3 | | 4 | 43 |
| 490 | 1 | 57 | 36.4 | 4 | 31 | 6.8 | 7 | 1 | 7 | 690 | 1 | 12 | 41.1 | 27 | 29 | 1.3 | 11 | 43 | 28 |
| | | | | | 1 | 47.9 | | 6 | 44 | | | | | | 1 | 13.7 | | 4 | 37 |
| 500 | 6 | 32 | 51.7 | 25 | 10 | 1.5 | 22 | 39 | 0 | 700 | 0 | 17 | 56.3 | 18 | 7 | 55.6 | 27 | 21 | 22 |
| | | | | | 1 | 16.0 | | 6 | 57 | | | | | | 1 | 12.6 | | 1 | 31 |
| 510 | 6 | 8 | 6.9 | 15 | 48 | 54.2 | 10 | 17 | 19 | 710 | 5 | 53 | 11.5 | 8 | 46 | 48.7 | 14 | 59 | 41 |
| | | | | | 1 | 41.3 | | 6 | 39 | | | | | | 1 | 16.5 | | 1 | 25 |
| 520 | 4 | 13 | 22.2 | 6 | 27 | 48.0 | 25 | 55 | 12 | 720 | 1 | 28 | 26.8 | 29 | 25 | 42.5 | 2 | 38 | 1 |
| | | | | | 1 | 42.5 | | 6 | 24 | | | | | | 1 | 9 | | 4 | 29 |
| 530 | 3 | 18 | 37.4 | 27 | 6 | 41.7 | 13 | 33 | 31 | 730 | 3 | 3 | 42.0 | 20 | 4 | 36.2 | 18 | 15 | 53 |
| | | | | | 1 | 19.8 | | 6 | 17 | | | | | | 1 | 7.5 | | 4 | 14 |
| 540 | 1 | 53 | 52.6 | 17 | 45 | 35.1 | 1 | 11 | 59 | 740 | 1 | 38 | 57.2 | 10 | 43 | 29.9 | 5 | 54 | 12 |
| | | | | | 1 | 39.0 | | 6 | 11 | | | | | | 1 | 6 | | 4 | 9 |
| 550 | 6 | 29 | 7.9 | 8 | 24 | 29.2 | 16 | 19 | 42 | 750 | 0 | 14 | 12.5 | 1 | 22 | 23.7 | 21 | 32 | 5 |
| | | | | | 1 | 37.3 | | 6 | 1 | | | | | | 1 | 4.5 | | 4 | 3 |
| 560 | 3 | 1 | 23.1 | 29 | 3 | 22.9 | 4 | 28 | 1 | 760 | 5 | 19 | 27.7 | 22 | 1 | 17.4 | 9 | 10 | 24 |
| | | | | | 1 | 35.5 | | 5 | 57 | | | | | | 1 | 3.0 | | 3 | 57 |
| 570 | 1 | 29 | 38.3 | 19 | 42 | 16.6 | 26 | 5 | 54 | 770 | 1 | 24 | 42.9 | 12 | 40 | 11.1 | 24 | 18 | 16 |
| | | | | | 1 | 33.8 | | 5 | 51 | | | | | | 1 | 1.5 | | 5 | 52 |
| 580 | 3 | 11 | 53.6 | 16 | 21 | 16.3 | 7 | 41 | 13 | 780 | 2 | 59 | 58.2 | 3 | 19 | 4.8 | 12 | 26 | 35 |
| | | | | | 1 | 32.0 | | 5 | 44 | | | | | | 1 | 0.0 | | 3 | 46 |
| 590 | 1 | 50 | 8.8 | 1 | 0 | 4.1 | 23 | 22 | 5 | 790 | 1 | 35 | 13.4 | 23 | 57 | 58.6 | 9 | 4 | 54 |
| | | | | | 1 | 39.3 | | 5 | 38 | | | | | | | 58.5 | | 3 | 41 |

DIFFERENCE FOR INTERMEDIATE YEARS.

| | | | | | | | | | | | | | | | | | | | |
|---|---|----|------|----|----|------|----|----|----|------|---|----|------|----|----|------|----|----|----|
| 1 | 1 | 15 | 31.5 | 11 | 3 | 53.4 | 7 | 9 | 42 | 6 | 0 | 33 | 9.1 | 6 | 23 | 20.2 | 14 | 58 | 39 |
| 2 | 2 | 31 | 3.0 | 22 | 7 | 16.7 | 14 | 19 | 24 | 7 | 1 | 48 | 40.7 | 17 | 27 | 13.6 | 22 | 8 | 21 |
| 3 | 3 | 46 | 31.6 | 3 | 11 | 16.1 | 21 | 29 | 6 | 8 | 3 | 4 | 12.2 | 28 | 31 | 6.9 | 1 | 18 | 29 |
| 4 | 5 | 2 | 6.1 | 14 | 15 | 33.5 | 0 | 39 | 15 | 9 | 4 | 19 | 43.7 | 9 | 35 | 0.3 | 8 | 28 | 11 |
| 5 | 6 | 17 | 37.6 | 25 | 19 | 26.8 | 7 | 48 | 57 | [10] | 5 | 35 | 15.2 | 20 | 38 | 53.7 | 15 | 37 | 52 |

CONTINUATION OF TABLE FOR THE ABDAPA, TITHI-SUDDHI, & TITHI-KENDRA.

| Expired Saka. | Abdapa. | Tithi-suddhi. | Tithi-kendra. | Expired Saka. | Abdapa. | Tithi-suddhi. | Tithi-kendra. |
|------------------|------------|--------------------|------------------|------------------|------------|--------------------|------------------|
| | vā. gh. p. | ti. gh. p. | ti. gh. p. | | vā. gh. p. | ti. gh. p. | ti. gh. p. |
| 800 | 0 10 28·7 | 14 36 52·3 57·0 | 15 42 47 3 35 | 1000 | 6 55 33·3 | 7 34 47·0 33·0 | 20 25 8 2 1 |
| 810 | 5 45 43·9 | 5 15 46·0 55·7 | 3 21 6 3 30 | 1010 | 5 30 48·5 | 28 13 40·7 32·1 | 8 3 28 1 58 |
| 820 | 4 20 59·2 | 25 54 39·8 54·4 | 18 58 59 3 25 | 1020 | 4 6 3·8 | 18 52 34·5 31·1 | 23 41 20 1 55 |
| 830 | 2 56 14·4 | 16 33 33·5 53·1 | 6 37 18 3 19 | 1030 | 2 41 19·0 | 9 31 28·2 30·2 | 11 19 40 1 51 |
| 840 | 1 31 29·6 | 7 12 27·2 51·8 | 22 15 20 3 14 | 1040 | 1 16 34·2 | 0 10 21·9 29·2 | 26 57 31 1 45 |
| 850 | 0 6 44·9 | 27 51 21·0 50·5 | 9 53 30 3 9 | 1050 | 6 51 49·5 | 20 49 15·7 28·3 | 14 35 52 1 45 |
| 860 | 5 42 0·1 | 18 30 14·7 49·2 | 25 31 22 3 4 | 1060 | 5 27 4·7 | 11 28 9·4 27·3 | 2 14 11 1 42 |
| 870 | 4 17 15·3 | 9 9 8·4 47·9 | 13 9 41 2 59 | 1070 | 4 2 19·9 | 2 7 3·1 26·4 | 17 52 3 1 39 |
| 880 | 2 52 30·6 | 29 48 2·1 46·6 | 0 48 0 2 53 | 1080 | 2 37 35·2 | 22 45 56·8 25·4 | 5 30 22 1 35 |
| 890 | 1 27 45·8 | 20 26 55·9 45·3 | 16 25 52 2 48 | 1090 | 1 12 50·4 | 13 24 50·6 24·5 | 21 8 13 1 32 |
| 900 | 0 3 1·0 | 11 5 49·6 44·0 | 4 4 11 2 43 | 1100 | 6 48 5·6 | 4 3 44·3 23·5 | 8 46 33 1 29 |
| 910 | 5 38 16·2 | 1 44 43·3 42·9 | 19 42 3 2 39 | 1110 | 5 23 20·8 | 24 42 38·0 22·7 | 24 24 25 1 26 |
| 920 | 4 13 31·5 | 22 23 37·1 41·8 | 7 20 23 2 35 | 1120 | 3 58 36·1 | 15 21 31·8 21·9 | 12 2 45 1 22 |
| 930 | 2 48 46·7 | 13 2 30·8 40·7 | 22 58 15 2 30 | 1130 | 2 33 51·3 | 6 0 25·5 21·1 | 27 40 37 1 19 |
| 940 | 1 24 1·9 | 3 41 24·5 39·6 | 10 36 34 2 26 | 1140 | 1 9 6·5 | 26 39 19·2 20·3 | 15 18 56 1 16 |
| 950 | 6 59 17·2 | 24 20 18·3 38·5 | 26 14 27 2 22 | 1150 | 6 44 21·8 | 17 18 13·0 19·5 | 2 57 16 1 12 |
| 960 | 5 34 32·4 | 14 59 12·0 37·4 | 13 52 46 2 18 | 1160 | 5 19 37·0 | 7 57 6·7 18·7 | 18 35 8 1 9 |
| 970 | 4 9 47·6 | 5 38 5·7 36·3 | 1 31 5 2 14 | 1170 | 3 54 52·2 | 28 36 6·4 17·9 | 6 13 27 1 6 |
| 980 | 2 45 2·9 | 26 16 59·4 35·2 | 17 8 57 2 9 | 1180 | 2 30 7·5 | 19 14 54·1 17·1 | 21 51 19 1 3 |
| 990 | 1 20 18·1 | 16 55 53·2 34·1 | 4 47 16 2 5 | 1190 | 1 5 22·7 | 9 53 47·9 16·3 | 9 29 38 59 |

DIFFERENCE FOR INTERMEDIATE YEARS.

| | | | | | | | |
|---|-----------|------------|----------|-----|-----------|------------|-----------|
| 1 | 1 15 31·5 | 11 3 53·4 | 7 9 42 | 6 | 0 33 9·1 | 6 23 20·2 | 14 58 39 |
| 2 | 2 31 3·0 | 22 7 46·7 | 14 19 24 | 7 | 1 48 40·7 | 17 27 13·6 | 22 8 21 |
| 3 | 3 46 34·6 | 3 11 40·1 | 21 29 6 | 8 | 3 4 12·2 | 28 31 6·9 | 1 18 29 |
| 4 | 5 2 6·1 | 14 15 33·5 | 0 39 15 | 9 | 4 19 43·7 | 9 35 0·3 | 8 28 11 |
| 5 | 6 17 37·6 | 25 19 26·8 | 7 48 57 | [10 | 5 35 15·2 | 20 38 53·7 | 15 37 52] |

CONTINUATION OF TABLE FOR THE ABDAPA, TITHI-SUDDHI, & TITHI-KENDRA.

| Expired Saka. | Abdapa. | | | Tithi-suddhi. | | | Tithi-kendra. | | | Expired Saka. | Abdapa. | | | Tithi-suddhi. | | | Tithi-kendra. | | |
|------------------|---------|-----|------|---------------|-----|--------------|---------------|-----|-----------|------------------|---------|-----|------|---------------|-----|-------------|---------------|-----|----------|
| | vā. | gh. | p. | ti. | gh. | p. | ti. | gh. | p. | | vā. | gh. | p. | ti. | gh. | p. | ti. | gh. | p. |
| 1200 | 6 | 40 | 38·0 | 0 | 32 | 41·6 15·5 | 25 | 7 | 31 5·5 | 1400 | 6 | 25 | 42·6 | 23 | 30 | 36·2 4·0 | 1 | 50 | 26 14 |
| 1210 | 5 | 15 | 53·2 | 21 | 11 | 35·3 14·9 | 12 | 45 | 50 54 | 1410 | 5 | 0 | 57·8 | 14 | 9 | 29·9 3·7 | 17 | 28 | 12 13 |
| 1220 | 3 | 51 | 8·5 | 11 | 50 | 29·1 14·2 | 0 | 24 | 10 51 | 1420 | 3 | 36 | 13·1 | 4 | 48 | 23·7 3·4 | 5 | 6 | 32 12 |
| 1230 | 2 | 26 | 23·7 | 2 | 29 | 22·8 13·6 | 16 | 2 | 2 49 | 1430 | 2 | 11 | 28·3 | 25 | 27 | 17·4 3·1 | 20 | 44 | 24 11 |
| 1240 | 1 | 1 | 38·9 | 23 | 8 | 16·5 12·9 | 3 | 40 | 21 47 | 1440 | 0 | 46 | 43·5 | 16 | 6 | 11·1 2·8 | 8 | 22 | 43 10 |
| 1250 | 6 | 36 | 54·2 | 13 | 47 | 10·3 12·3 | 19 | 18 | 14 44 | 1450 | 6 | 21 | 58·8 | 6 | 45 | 4·9 2·5 | 24 | 0 | 36 9 |
| 1260 | 5 | 12 | 9·4 | 4 | 26 | 4·0 11·6 | 6 | 56 | 33 42 | 1460 | 4 | 57 | 14·0 | 27 | 23 | 58·6 2·2 | 11 | 38 | 55 9 |
| 1270 | 3 | 47 | 24·6 | 25 | 4 | 57·7 11·0 | 22 | 34 | 25 40 | 1470 | 3 | 32 | 29·2 | 18 | 2 | 52·3 1·9 | 27 | 16 | 47 8 |
| 1280 | 2 | 22 | 39·9 | 15 | 43 | 51·4 10·3 | 10 | 12 | 44 38 | 1480 | 2 | 7 | 44·5 | 8 | 41 | 46·0 1·6 | 14 | 55 | 6 7 |
| 1290 | 0 | 57 | 55·1 | 6 | 22 | 45·2 9·7 | 25 | 50 | 36 35 | 1490 | 0 | 42 | 59·7 | 29 | 20 | 39·8 1·3 | 2 | 33 | 25 6 |
| 1300 | 6 | 33 | 10·3 | 27 | 1 | 38·9 9·0 | 13 | 28 | 55 33 | 1500 | 6 | 18 | 15·0 | 19 | 59 | 33·5 1·0 | 18 | 11 | 17 5 |
| 1310 | 5 | 8 | 25·5 | 17 | 40 | 32·6 8·5 | 1 | 7 | 14 31 | 1510 | 4 | 53 | 30·2 | 10 | 38 | 27·2 | 5 | 49 | 37 |
| 1320 | 3 | 43 | 40·8 | 8 | 19 | 26·4 8·0 | 16 | 45 | 7 29 | 1520 | 3 | 28 | 45·5 | 1 | 17 | 21·0 | 21 | 27 | 29 |
| 1330 | 2 | 18 | 56·0 | 28 | 58 | 20·1 7·5 | 4 | 23 | 26 27 | 1530 | 2 | 4 | 0·7 | 21 | 56 | 14·7 | 9 | 5 | 48 |
| 1340 | 0 | 54 | 11·2 | 19 | 37 | 13·8 7·0 | 20 | 1 | 18 25 | 1540 | 0 | 39 | 15·9 | 12 | 35 | 8·4 | 24 | 43 | 40 |
| 1350 | 6 | 29 | 26·5 | 10 | 16 | 7·6 6·5 | 7 | 39 | 38 23 | 1550 | 6 | 14 | 31·2 | 3 | 14 | 2·2 | 12 | 22 | 0 |
| 1360 | 5 | 4 | 41·7 | 0 | 55 | 1·3 6·0 | 23 | 17 | 30 22 | 1560 | 4 | 49 | 46·4 | 23 | 52 | 55·9 | 0 | 0 | 19 |
| 1370 | 3 | 39 | 56·9 | 21 | 33 | 55·0 5·5 | 10 | 55 | 49 29 | 1570 | 3 | 25 | 1·6 | 14 | 31 | 49·6 | 15 | 38 | 12 |
| 1380 | 2 | 15 | 12·2 | 12 | 12 | 48·7 5·0 | 26 | 33 | 41 18 | 1580 | 2 | 0 | 16·9 | 5 | 10 | 43·3 | 3 | 16 | 36 |
| 1390 | 0 | 50 | 27·4 | 2 | 51 | 42·5 1·5 | 11 | 12 | 0 16 | 1590 | 0 | 35 | 32·1 | 25 | 49 | 37·1 | 13 | 54 | 22 |
| | | | | | | | | | | 1600 | 6 | 10 | 47·3 | 16 | 28 | 30·7 | 6 | 32 | 42 |
| | | | | | | | | | | 1610 | 4 | 46 | 2·5 | 7 | 7 | 24·4 | 22 | 10 | 34 |
| | | | | | | | | | | 1620 | 3 | 21 | 17·8 | 27 | 46 | 18·2 | 9 | 48 | 54 |
| | | | | | | | | | | 1630 | 1 | 56 | 33·0 | 18 | 25 | 11·9 | 25 | 26 | 46 |
| | | | | | | | | | | 1640 | 0 | 31 | 48·2 | 9 | 4 | 5·6 | 13 | 5 | 5 |
| | | | | | | | | | | 1650 | 6 | 7 | 3·5 | 29 | 42 | 59·4 | 0 | 43 | 25 |
| | | | | | | | | | | 1660 | 4 | 42 | 18·7 | 20 | 21 | 53·1 | 16 | 21 | 17 |
| | | | | | | | | | | 1670 | 3 | 17 | 33·9 | 11 | 0 | 46·8 | 3 | 59 | 36 |
| | | | | | | | | | | 1680 | 1 | 52 | 49·2 | 1 | 39 | 40·5 | 19 | 37 | 28 |
| | | | | | | | | | | 1690 | 0 | 28 | 4·4 | 22 | 18 | 34·3 | 7 | 15 | 47 |

DIFFERENCE FOR INTERMEDIATE YEARS.

| | | | | | | | | | | | | | | | | | | | |
|---|---|----|------|----|----|------|----|----|----|-----|---|----|------|----|----|------|----|----|-----|
| 1 | 1 | 15 | 31·5 | 11 | 3 | 53·4 | 7 | 9 | 42 | 6 | 0 | 33 | 9·1 | 6 | 23 | 20·2 | 14 | 58 | 39 |
| 2 | 2 | 31 | 3·0 | 22 | 7 | 16·7 | 14 | 19 | 24 | 7 | 1 | 13 | 10·7 | 17 | 27 | 13·6 | 22 | 8 | 21 |
| 3 | 3 | 16 | 31·6 | 3 | 11 | 40·1 | 21 | 29 | 6 | 8 | 3 | 4 | 12·2 | 28 | 31 | 6·9 | 1 | 18 | 29 |
| 4 | 5 | 2 | 6·1 | 14 | 15 | 33·5 | 0 | 39 | 15 | 9 | 4 | 19 | 43·7 | 9 | 35 | 0·3 | 8 | 23 | 11 |
| 5 | 6 | 17 | 37·6 | 25 | 19 | 26·8 | 7 | 48 | 57 | [10 | 5 | 35 | 15·2 | 20 | 38 | 53·7 | 15 | 37 | 52] |

BOOK NOTICE.

PROF. WEBER'S EDITION OF THE PARASIPRAKASA.¹

A *Pâr'si Pâr'kâs* of Vêdânga Râya (Bêdîng Rây)² has been known to scholars since the publication of Garcin de Tassy's *History of the Language and Literature of Hindûstân*, in page 519 of the first volume of which, an account is given of it. This work was written for Shâh Jahan about the middle of the 17th century, and according to Garcin de Tassy described the manner of counting the months, &c., adopted by Hindus and Musalmâns. Prof. Weber now introduces us to an older and apparently more complete Persian-Sanskrit Glossary written in the latter portion of the 16th century for the emperor Akbar. The work bears the same name, the *Pîrast-Prakîsa*, and was written by a Śākadvîpiya Brāhmaṇ named Kṛishṇadâsa.

In his introduction to this edition, Prof. Weber gives an account of the traces of the relations between India and Persia which can be gathered from Sanskrit literature. First, there are reminiscences of a common Perso-Āryan and Indo-Āryan period in the Vêda. Next we have the historical record of Indian Auxiliaries with the Achæmenides in their struggles with the Greeks. From this time dates the introduction of words like *Yavana*, *Bîrûn* (Babylon), and *Mudrâ*. The last word Prof. Weber connects with the cuneiform *Mudrâya*, the ancient name for Egypt. Again, perhaps the *Nṛsimha* of the Vaiṣṇavas may be referred to man-headed lions of Nineveh, Persepolis, &c. The word *Bâhlî* (first met in the *vîrti*, to Pāṇini, 4. 2. 99) is also to be referred to the old Persian Bâkhtri (Bactria).

The *Magas*, the representatives of the worship of Mithra, are, Prof. Weber thinks, perhaps related to the *Βασιλῆες Μαγῶν* of Ptolemy, at any rate we have Varāhamihira's authority that a Magian colony had long before his time obtained a secure foothold in India; and the modern Śākadvîpiya Brāhmaṇs refer to that tribe their origin.

The Gupta inscriptions disclose intimate relations with the *Pahlavas* or Parthian Arsacides, and with the *Pârasikas* or Persian Sasanides. And from this period date a whole series of words of a political and of a military character used in Sanskrit, such as *Shâhînushâhi*, *Kshatrapa* (a Satrap), *pîlu* (an elephant, *فيل*), and *taravara* (a sword).

The *Muhammadian* invasion was the means of introducing many foreign words, especially Arabic and Turkish, into Sanskrit. Such were

several astronomical and medicinal terms, and also, curiously enough, many words used in the game of chess, though it is undoubtedly of Indian origin.

Lastly, several foreign words have crept into the collections of fables from the popular idiom. And to these may be added many foreign words borrowed and then transformed into possible Sanskrit terms through the influence of popular etymology. Examples of this last are *Saratvâta*, 'Sultân', *Mausala*, 'Muslim'; *Mudgala*, 'Mughal'; *Śîsha Śekha*, 'Schkh'; *Mîsra*, 'Mirza' and so on.

I may perhaps be permitted to carry on this a step further. I have a Sanskrit translation of the Arabian Nights in my possession, entitled the *Ārabya-Yamini*. The translator has borrowed the Arabic names of places and persons as they stand, trans-literating them into Nāgari, and then giving them, in the commentary, Sanskrit derivations!! Examples of this ludicrous word-play are Sahariyâra (سهاريار), which he derives from *Saha*, 'strength', *ri*, 'wealth', and *dra*, 'a corner,' i.e. 'he in whose inmost recesses are power and wealth.' The name of the town of Samarkand (*tatpralêśântargatapradhînanagarê Samarakandâbhidhînê*) is explained as follows: '*sanariyâ yudhîya*; *kuda* (✓ *kud*; to cry) *dhînâh yatra dîś*, so *Samarakanda*.' The meeting between the queen and her lover Mas'ûd (مسعود) is thus described: '*parantû rîjamakishî karatâlaprâdinaparahsara*.' "*Mîsûda Mîsûd*," ty *aktrâ-heina*, *kratârâ*, to which is added the following piece of etymology: '*Mîsûda iti Ma'ra Lakshmi'ra; sîdah pîchakî*.' *iti Mîsûdah*!!!

Prof. Weber next gives a sketch of the history of the Śākadvîpiya Brāhmaṇs, and shows the probability that in ancient times Iranian strangers entered India from *Sakadvîpa* and were admitted directly into the ranks of the Brāhmaṇs. I may mention here that, in Bihâr, at the Śrâddha ceremony all Brāhmaṇs may be fed by the performer, except Śākadvîpiyas. Even Jyôtiṣa Brāhmaṇs who are below the Śākadvîpiyas in caste, are fed, but never the latter.

The *Pîrast-prakîsa* consists of about 260 *ślokas*, in which 1065 Persian words are explained. As a rule, each quarter-verse explains a different word; but this is not universal. The Persian word is given in the nominative, and the Sanskrit meaning usually in the locative. It is written in the customary *kîsa* form with ten *vargas*, but the

¹ Über den *Pîrast-prakîsa* des Kâsi. U. S. von A. Weber. Berlin 1857. Verlag des Königl. Akad. der Wissenschaften. In commission bei Georg Reimer.

² I have not seen Bêdîng Rây's work, but, judging from its being noticed by Garcin de Tassy, I presume it was in the Vernacular. Prof. Weber well knows it well, and can no doubt give us further information on the subject.

names of these latter only partially agree with their contents.

The following account of a portion of the first (*svargavarga*) will act as a specimen of the whole. The author begins, as a Śākadvipiya Brāhman, with the names of the sun (here the influence of Akbar's Ilāhi religion shows itself) and then gives the names of God and of the evil spirits. viz. *dēvatā*, *paramēśvara* and *asura*, corresponding to *ilāhī*, *nūrāt*, *khudāya*, *ivlāsa* and *šaitāna* respectively. He mentions neither Allāh, nor Brahman, nor Viṣṇu, nor Śiva. *Yama*, *apsaras* and *rākshasa*, are given as the equivalents of *Yavratla* (the angel Gabriel!), *parī* and *ādami-khīra*. Then we have nectar (*pīyūṣha*) and the *kalpataru*, corresponding to *āvahayāta* and *tāvā*. Paradise is *svarga* (= *vihīṣṭa*). Hell is *naraka* (= *dōjakha*), and Adam and Eva are Manu and his *grihēśvari* (!).

The Persian with which the author deals is the Persian (or rather the Ūrdū) of Hindustān, full of Arabic and Turki words, and sometimes even of words of Hindu origin. Specimens of the latter class, which are given by the author as Persian, are words like *varsātām* (the rains), *jharōkhā* (a window), *tamrū* (a tent) and so on.

Owing to the Persian words being transcribed in the Nāgari character, difficulty has been experienced by the editor in identifying some of them, especially as the Sanskrit translations were often by no means clear. One or two of these doubtful words are capable of being explained by a reference to the modern vernacular: e.g. (15) *tākah dīpālayē*. The latter word is new to Professor Weber, and he compares it with *dīpālī*, 'a row of lamps'; *tika* he fails to identify. It is the Arabic طاق, 'a recess in a wall.' The *tīq* is used especially for putting a lamp into, and hence it is also called *dīwār* or *dīwāl*, a corruption of *dīpālaya*, 'lamp-house'. *Dīwār* does not occur in Hindustāni dictionaries, being confounded with the Persian *dīwār*, 'a wall.' It is, however, in common use.

(295) *hujarah tu guphātīn syāt*. As Professor Weber accurately points out, حجرة means 'a court-yard'; regarding *guphā* he says, 'it is as yet unknown in Sanskrit, cf. Marāṭhī *gumphā*, an arbour, a bower, a cavern, a cave.' He suggests that *guphā* in Sanskrit means 'a courtyard.' I would suggest that *guphā* in Sanskrit must have meant 'a cave,' cf. *guhā*, which is apparently a Prākṛitized form of it, or else *guphā* is a falsely resuscitated Sanskrit manufacture from (the apparently Prākṛit) *guhā*. Anyhow, *guphā* in

mediaeval Hindī means 'a cave,' and nothing else. How is it then the equivalent of *hujara*, 'a court-yard? I think the answer will be found in the fact that Kṛishṇadāsa dealt with the Persian of India. In colloquial Hindustāni I have only met the word in one sense,—equivalent to the slang use of the English 'den.' It is used in phrases like the following,—'tum din rāt hujarē mēn ghusērahṭē hō,' of a man who boorishly or sulkily shuts himself up in his house, and refuses to see any one,—'You remain day and night hidden in your den.' The metaphorical use of this word may well be explained by the Hindi *guphā* ¹

(313) *jīnah pārōhanē*. Prof. Weber says that the use of *pārōhana* (i.e. *prārōhana*) in the sense of 'saddle' is unsupported by other authorities. Here, I think, we have another instance of the author building-up a pseudo-Sanskrit word from the vernacular. *Parōhan* in Hindī meaning anything on which a person rides. Thus, in a well-known proverb, a donkey is called the washerman's *parōhan* (see *Bihār Peasant Life* § 393.) The word as explained by natives would include the meaning of 'saddle.' In 605, *parāṇa* also is given as the equivalent of *jīna*. The reading of G. *palānē* is instructive as giving the form used by Vidyāpati Thākur, who wrote in the vernacular, A.D. 1400. Vidyāpati has even a verbal root *palāna* 'to saddle.' ²

(385) *Khārishah kamdūshu rasakēshu cha*.—Prof. Weber suggests *kanḍā* (pl.) as meaning 'itching places'; and *rasaka* (also in the plural) as 'moist itching wounds.' In Bihār both words are still used, to express different varieties of the same disease. *Kanḍā* is 'dry itch,' and *ras* is 'moist itch.'

(478) *vātpōśas tu tūlikā*. *Bālpōsh* is 'an outer garment.' The Sanskrit dictionaries give *tūlikā* as meaning 'a mattress filled with cotton.' The meaning of 'outer garment' is not given. Again the missing link will be found in the vernacular. In south-east Bihār *turdi* means a light quilt containing less than a pound of cotton. These quilts are always worn as outer garments. Cf. *Bihār Peasant Life*, § 731.

I regret that time does not permit me to make more than these few suggestions, which, I need hardly say, are offered with the heartiest admiration for the learning and acumen displayed in this most useful book. Prof. Weber is to be congratulated on a work which, if possible, lends an enhanced lustre to his great reputation.

G. A. GRIERSON.

¹ *Hujra* in the Punjab is used as the "abode," i.e. a dark mud hut, of a Muhammadan ascetic.—R. C. T.]

² Bid 82. 3, *Ughaka chhāla p' basaka palānala*, 'inasmuch as he has saddled his bullock with a tiger's skin.'

THE BAKHSHALI MANUSCRIPT.

BY DR. A. F. RUDOLF HOERNLE.

(Continued from p. 48.)

No. II.

TWO more plates were to have illustrated my paper on the **Bakhshali Manuscript**, published in the February number of this Journal. Through an unfortunate misadventure they were not forthcoming at that time, and are now given as a supplement.

The page, figured on Plate II, is the obverse of the leaf the reverse page of which is figured on Plate I, previously published. It contains another portion of sūtra 25, and reads as follows¹ :—

TEXT.

- 1 . tē dhanam | yasya tanmayatā chakshu vada |
 2 apabrita-śulka-piṇḍam 24 || karaṇam || kṛtvā rūpa-ksha-
 3 ya-pāsta $\begin{array}{|c|c|c|} \hline 2 & 3 & 4 \\ \hline 3 & 4 & 5 \\ \hline \end{array}$ | jātu samguṇya jātam $\frac{2}{5}$ | ētāvad api rūpa-samśu-
 4 ddhā-jātam $\begin{array}{|c|c|c|} \hline 2 & 3 & 4 \\ \hline 3 & 4 & 5 \\ \hline \end{array}$ | anēna bhaktvā śulka-piṇḍam guṇitam jātam | 40
 5 ēśa piṇḍam pratyayam $\begin{array}{|c|c|} \hline 2 & 40 \\ \hline 5 & 1 \\ \hline \end{array}$ | guṇita jātam 16 śeṣam | 24 [1 ē-]
 6 vaṁ 40 || anyam a $\begin{array}{|c|c|} \hline 2 & 40 \\ \hline 5 & 1 \\ \hline \end{array}$ | sya pratyayam $\frac{40}{1}$ | phalam 16 kshayam 24
 7 ēvaṁ 40 || udā || guḍa-piṇḍa $\begin{array}{|c|c|} \hline 1 & 1 \\ \hline 3 & 1 \\ \hline \end{array}$ | jñāta-tulyōś chatu
 8 . vyē guḍam | tṛi-chatush-pañcha-shaḍ-vṛiddhyā chatvā $\begin{array}{|c|c|} \hline 1 & 1 \\ \hline 3 & 1 \\ \hline \end{array}$ | rimśa vē kshaya

The page figured on the lower half of Plate III is the same as that figured on Plate I. That figured on the upper half is the reverse (not "obverse" as stated on the Plate) of a leaf which contains the concluding portion of sūtra 53 and the beginning of sūtra 54. It reads as follows :—²

TEXT.

- 1 . . . śikēna | $\begin{array}{|c|c|c|} \hline 1 & 13 & 30 \\ \hline 1 & 6 & 1 \\ \hline \end{array}$ | pha 65 | prathamāna dvitīya-sya [10]
 2 r-dattā jāta | 55 | $\begin{array}{|c|c|c|} \hline 1 & 3 & 30 \\ \hline 1 & 2 & 1 \\ \hline \end{array}$ | pha 45 | 55 || samadhanā jāta ||
 3 Sūtram tṛipañchāśamaḥ sūtram 53 || [vikra]-
 4 yēna krayam bhājyam rūpa-hīnam punar bhajēt — $\frac{1}{2}$ — labhē[na]
 5 guṇayē tatra nīvi bhavati tatra cha || udā || dvibhish kriyati yaś sa-
 6 pta vikriyati tṛibhish shaḥ aṣṭādaśa bhavēd labhās ka nī[vī]
 7 [ta]tra katthyatām || $\begin{array}{|c|c|c|} \hline 7 & 6 & 18 \\ \hline 2 & 3 & 1 \\ \hline \end{array}$ | karaṇam | vi[śeṣam] .
 8

The concluding portion of the fifty-third sūtra on the above page has been already transcribed and translated in my previous account of the MS., *ante*, pp. 41 and 44. I proceed to do the same with the remainder of the page, as well as with the portions of the twenty-fifth sūtra contained in Plates I and II.

The substance of the portion on Plate I has been already briefly explained, in Note 6, p. 47 above, but for the sake of completeness I repeat it. The portions of the twenty-fifth sūtra represented on Plates I. and II. belong to the latter part of it, and comprise four of its examples, *viz* from the tenth to the thirteenth.

¹ The transcripts are again made from the original, as the lithographs are not quite perfect. The statements on the plates which reverse the position of the two pages are incorrect.

² The two pieces at the upper right-hand corner have

got displaced. The lower of the two pieces should be reversed, and joined on to the top of the upper of the two pieces, and then the joint-piece should be brought down to the main piece.

The total number of its examples is fifteen (see p. 34 above).

TEXT.

25th Sūtra.

*Kṛtvā rūpakshayaṁ pārtham dhāntasam-
guṇanam tataḥ |*

*Pravṛtṭi-r-guṇanam bhaktvā . . . vi-
nirdiśēt⁹ ||*

Udā ||

. |
. | tē dhanam |

*Yasya tanmayatā chakshu
vada ||*

. | apahṛitaśulkaṇḍam 24 || kara-

nam || kṛtvā rūpakshayaṁ pāsta $\left[\begin{smallmatrix} 2 & 3 & 4 \\ 3 & 4 & 5 \end{smallmatrix} \right]$ jātu

saṁguṇya jātam $\left[\begin{smallmatrix} 2 \\ 5 \end{smallmatrix} \right]$ etāvad api rūpasamśuddhā

jātam $\left[\begin{smallmatrix} 3 \\ 5 \end{smallmatrix} \right]$ anēna bhaktvā śulkaṇḍam guṇitam

jātam $\frac{40}{5}$ ēsa piṇḍam pratyayaṁ $\left[\begin{smallmatrix} 2 & 40 \\ 5 & 1 \end{smallmatrix} \right]$ guṇi-

ta jātam 16 śēshaṁ | 24 | ēvam $\frac{40}{5}$ || anyam

asya pratyayaṁ $\frac{40}{1}$ phalaṁ 16 kshayaṁ 24

ēvam $\frac{40}{5}$ || $\frac{1}{3+}$

$\frac{1}{3+}$

$\frac{1}{4+}$

$\frac{1}{4+}$

$\frac{1}{5+}$

Udā ||

*Guḍapiṇḍa jūātātulyôś chaturī . . vyē
guḍam |*

*Trichatuṣpaṁchashaḍyṛiddhyā⁸ chatvārim-
śa vē kshaya ||*

Udā ||

*Ajūta-r-ambhalôhasya trichatuṣpaṁchakā⁹
kshayē |*

*Saptavimsati piṇḍasya tridhāntaśēshya dri-
shyatē ||*

*Kim sarvaṁ vada tatvajña kshayaṁ cha
mama katthyatām ||*

$\left[\begin{smallmatrix} 1 & 1 & 1 \\ 3 & 4 & 5 \end{smallmatrix} \right]$ śē $\frac{27}{1}$ | karaṇam | kṛtvā rūpaksha-

yaṁ pārtha $\frac{2}{3} \frac{3}{4} \frac{4}{5}$ guṇitam jātam $\frac{2}{5}$

rūpakshayaṁ $\left[\begin{smallmatrix} 3 \\ 5 \end{smallmatrix} \right]$ anēna śēshaṁ bhaktam śē-

shaṁ | 27 | bhaktam jātam 45 asya saptāvimsa¹⁰

⁸ The preceding portion is not on the plate. It has been added from another leaf for the sake of completeness.

⁹ The original has the *upallamānīya* in 'chatuṣpaṁchakā'.

¹⁰ The original spells it with the guttural nasal con-sonant.

¹¹ Read *paśy chāntamśakam*.

¹² The original has the *jīhvāmūlīya*.

pātya śēshaṁ 18 || ēta-kshayaṁ ||

Uda ||

*Parikṣhīyasya lôhasya tridhāntam paṁcha-
māśakam⁶ |*

*Na jūāyatē-t-pravṛttikām na cha śēsha pra-
dīśyatē ||*

*Pravṛtṭiśēshaṁ yō piṇḍam k'valam viṁśati
sthitaṁ |*

*Âdarkṛyatām pravṛtṭi syā kim vā śēshaṁ
vadasva mē ||*

$\left[\begin{smallmatrix} 1 & 1 & 1 \\ 3 & 4 & 5 \end{smallmatrix} \right]$ || kṛtvā rūpakshayaṁ

54th Sūtra.

*Vikrayēna krayam bhājyam rūpahīnam punar
bhajēt |*

Lābhēna guṇayē tatra nīvī bhavati tatra cha ||

Udā |

*Dvibhish⁷ kriṇāti yas sapta vikriṇāti tribhis
sa⁸ shat |*

*Ashtidaśa bhavēd lābhāsh⁷ kâ nīvī tatra
katthyatām ||*

$\frac{7}{2} \frac{6}{3} \frac{13}{1}$ lābhā | karaṇam | vikrayēna

⁹guṇitam jātam | 24 | ēsa nīvī jātā | sya¹⁰
pratyayaṁ *trairāśikēna* || yadi dvibhis sapta

labhyatē | tadā chaturvimsatibhish⁷ kim

$\left[\begin{smallmatrix} 2 & 7 & 24 \\ 1 & 1 & 1 \end{smallmatrix} \right]$ phalaṁ bha¹¹ 84 || asya vikrayam

kriyatē | yadi-sh-shaḍbhi traya . nā¹² labhyatē

tadā chaturāśtibhish⁷ kim $\left[\begin{smallmatrix} 6 & 3 & 84 \\ 1 & 1 & 1 \end{smallmatrix} \right]$ phalaṁ

42 | mūlam 24 | pātyaśēshaṁ 18 ēsha lābhāḥ

Chaupamchāśamasūtram 54 — • —

TRANSLATION.

25th Sūtra.

Having subtracted the series (of the given rates) and (the product of) the multiplication of the instalments from one, let (the arithmetician) determine the original amount by multiplication (with the remainder) after dividing (the latter).

⁶ Conjecturally restored; the original omits *sa* without which the line does not scan.

⁷ The following portion is not on the plate. It has been added to complete the sūtra.

¹⁰ Read *asya*.

¹¹ Apparently an abbreviation of *bhavati*.

¹² Perhaps read *puṇā* (*punar*), only one *akshara* is lost.

Plate II.

Size 8 1/4" by 7".

Reverse restored.



Obverse

1
2
3
4
5
6
7
8

Obverse.

Eleventh Example.

(This example is too fragmentary to be translated. Its purport may be inferred from the solution to have been somewhat as follows:—Of a certain quantity of goods, a merchant has to pay, as duty, one-third, one-fourth and one-fifth on three successive occasions. The total amount of duty he thus pays is 24. What was the original quantity of his goods?)

(The statement is partially wanting, but the whole of it may be easily restored thus:— $\frac{1}{3}, \frac{1}{4}, \frac{1}{5}$ is the series of rates); the total duty taken is 24.

Solution:—“Having subtracted the series from one” we get $\frac{2}{3}, \frac{3}{4}, \frac{4}{5}$; these multiplied altogether give $\frac{2}{5}$; that again, subtracted from one, gives $\frac{3}{5}$; with this, after having been divided, (i.e. inverted, $\frac{5}{3}$), the total duty (24) is multiplied, giving 40; that is the original quantity.

Proof: $\frac{2}{5}$ multiplied with 40 gives 16 as the (ultimate) remainder: (to this add the total duty) 24; hence (the original quantity is) 40.

Another proof of it: 40 multiplied with $1 - \frac{1}{3}$ and $1 - \frac{1}{4}$ and $1 - \frac{1}{5}$ gives the result 16 (or in notation): $40 \times [(1 - \frac{1}{3}) \times (1 - \frac{1}{4}) \times (1 - \frac{1}{5})] = 16$; the deduction is 24; hence (the total is) 40.

Twelfth Example.

[I cannot venture to translate the example, as it is only preserved in a fragmentary state, and all the rest that might have explained it—statement, solution and proof—is entirely lost. The following does not pretend to be more than a guess at its purport:—A merchant possesses a quantity of molasses of a certain weight; he makes, on four successive occasions, additions thereto of one-third, one-fourth, one-fifth and one-sixth; the difference (between these additions and the original quantity) is forty. What was the original quantity, and what is the final total amount?

Solution:—One added severally to $\frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}$ gives $\frac{4}{3}, \frac{5}{4}, \frac{6}{5}, \frac{7}{6}$; these instalments multiplied together give $\frac{7}{3}$; subtracting 1 from $\frac{7}{3}$ we get $\frac{4}{3}$; with $\frac{4}{3}$ divided (or inverted, i.e., $\frac{3}{4}$)

the difference 40 is multiplied, giving $\frac{40 \cdot 3}{4}$ or 30; hence the original quantity was 30, and the final amount is 70].

Thirteenth Example.

Of an unknown quantity of lapis lazuli, one-third, one-fourth and one-fifth go in loss: the (total) loss of the quantity, accruing in three instalments, is found to be twenty-seven. Say, O wise man, what is the total, and let me also be told the difference (between the total and the loss, i.e. the remainder)?

Statement: $\frac{1}{3}, \frac{1}{4}, \frac{1}{5}$ are the rates of loss; the (total) loss is 27.

Solution:—“Having subtracted the series from one,” we get $\frac{2}{3}, \frac{3}{4}, \frac{4}{5}$, which being multiplied give $\frac{2}{5}$; subtracting this from one, we get $\frac{3}{5}$, by this the loss is divided: the loss is 27; dividing this by it, we get 45; out of this the loss is twenty-seven; hence the difference (or remainder) is 18.

Fourteenth Example.

Of waste iron there are three instalments, of which one-fifth is the last rate.¹³ The original amount is not known, nor is the wastage declared; but the remainder of the original amount is only twenty. Now let the original amount be shown, and tell me what shall be the wastage.

Statement: $\frac{1}{3}, \frac{1}{4}, \frac{1}{5}$ (is the series of rates of wastage).

(The solution and proof are wanting; but after the analogy of those of the preceding examples, the solution would run thus:—“Subtracting the series from one,” we get $\frac{2}{3}, \frac{3}{4}, \frac{4}{5}$; multiplying these, we get $\frac{2}{5}$; dividing with this the remainder 20, we get 50 as the original amount: hence the wastage is 30).

54th Sūtra.

With the sale the purchase should be divided; then divide it again (after being) diminished by one; then multiply it with the profit; (the result) is then the capital.

Example.

One who purchases seven for two, sells six

¹³ This, as the context and statement shows, is undoubtedly the meaning of the word which in the MS. is written *pañchamī-akam*, and which qualifies *truth intam*. The former word seems to be a mis-spelling for *pañcha-*

mīn-śakan (i.e. *pañchama* and *am-akam*) ‘having one-fifth as a (final) part’. But it may be also suggested to be an error for *pañchamīntakam*, ‘having one-fifth as its final (rate).’

for three. Eighteen is his profit. Say now, what was his capital?

Statement: $\frac{7}{2}$ and $\frac{6}{3}$ (are the rates of purchase and sale); 18 is the profit.

Solution (may be thus restored):—"With the sale (the purchase should be divided):" the rate of purchase is $\frac{7}{2}$, that of sale is $\frac{6}{3}$; dividing with the latter, we get ($\frac{7}{2} \div \frac{6}{3}$ or) $\frac{7}{4}$; subtracting 1 from $\frac{7}{4}$, we get $\frac{3}{4}$; this, being divided (or inverted), becomes $\frac{4}{3}$; with this, multiplying (the profit 18), we get 24; this is the capital.

Proof of this by the rule of three:—If seven are got for two, then how much (is got) for twenty-four, or in notation $2:7=24:84$. This (*i.e.* 84) is sold. If for six are again got three, then how much (is got) for eighty-four, or in notation $6:3=84:42$; (hence) the original amount was 24, and the remainder of the property is 18; that is the profit.

NOTES.

1. On the terms *pārtha*, *dhānta*, *pracṛitti*, *bhaktvā*.—The term *pārtha* occurs very frequently in the fifteen examples of the 25th sūtra. It is sometimes spelt *pāsta* (as on Plate II), which spelling indeed occurs as often as *pārtha*. Once I also found the spelling *pāstha*. Neither of the three words is found in any Sanskrit dictionary accessible to me. But it seems clearly to appear from the context that the meaning of the word must be 'series,' *i.e.* the series of the rates or proportions. I take *pārtha* to be a synonym of *pārthakya* (which is given in the dictionaries), and a derivative of *pārtha* in the sense of 'several' (like *prithak*). The term *pāsta*, if it is not an error for *pārtha*, I would take to stand for *apāsta* (*apa-asta*), 'what is thrown away,' 'deduction.' It will be observed that the series of instalments often refers, in the examples, 'to deductions' made (by way of 'wastage' or 'duty') from the original amount. This may explain, why *pāsta* might be occasionally substituted for *pārtha*. The term *pāstha*, I am disposed to think, is simply an error for *pārtha*, or for *pāsta* if the latter form be also admissible.—The term *dhānta* is derived from the suffix *dhā* and *anta*, and means literally 'that which ends in *dhā*,' (as *devādhā*, *trīdhā*, &c.). It hence comes to be equivalent to our 'instalment,'—The term

pracṛitti is explained in the solution of an example to the 26th sūtra to 'mean the original amount, the stock or capital.' In that example the 'original amount' is required to be found, and it is then shown to be 81, to which is added the remark *ēśa pracṛittir ity arthah*, 'this is the original amount, that is the meaning of it.' In this sense of the 'original amount,' the word *pracṛitti* does not appear to be noted in any Sanskrit dictionary. The meaning, however, is readily deducible from the root of the word.—The term *bhaktvā*, 'having divided,' (or *bhajēt* or *bhūga*) is technically applied to a fraction, when it is to be used as a divisor, and directs the 'inversion' of the fraction. For example, if 24 is to be divided by $\frac{3}{5}$, the direction given is,—'divide $\frac{3}{5}$ and multiply it with 24,' where we might say,—'invert $\frac{3}{5}$ and multiply with 24,' that is, $\frac{5}{3} \times 24 = 40$.

2. Examples of sūtra 25. In the 11th example the original quantity is 40; of this $\frac{1}{3}$, or $13\frac{1}{3}$, is paid as duty; the remainder is $26\frac{2}{3}$; of this $\frac{1}{4}$, or $6\frac{2}{3}$, is paid as duty; the remainder is 20; of this $\frac{1}{5}$, or 4, is paid as duty, the remainder is 16. The three instalments of duty, $13\frac{1}{3} + 6\frac{2}{3} + 4$, amount to 24. And $16 + 24$ is 40.—The 13th example is similar to the 11th. The arithmetical process had been given correctly in my previous note (p. 48 above); but, on reconsideration, I think, the exact meaning of the example is as now given. It is not the 'loss,' but the 'remainder,' that is required to be found. The method of the 25th sūtra is based on the following considerations;—The original quantity is assumed to be one; then the remainder, after the first instalment of duty is paid, is $1 - \frac{1}{3}$ or $\frac{2}{3}$; if the quantity on which the second instalment of duty is paid, be assumed to be one, the remainder after paying that instalment is $1 - \frac{1}{4}$ or $\frac{3}{4}$; but the quantity on which it is really paid is $\frac{2}{3}$; hence the proportionate remainder is $\frac{2}{3} \times \frac{3}{4}$ (*i.e.* $1 : \frac{3}{4} = \frac{2}{3} : \frac{2 \cdot 3}{3 \cdot 4}$); similarly if the quantity on which the third instalment is paid, be assumed to be 1, the remainder, after paying that instalment, is $1 - \frac{1}{5}$ or $\frac{4}{5}$; but the quantity on which it is really paid is the previous

first case is illustrated by the 11th and 13th examples; the second case, by the 14th example. From these considerations the several steps directed in the rule will be readily understood: *viz.* (1) to subtract each rate of the series from one; (2) to multiply the several instalments thus obtained; (3) to subtract the product, thus obtained, from one; (4) to 'divide' (*i.e.* invert) (either the product, obtained by the second step, or the remainder, obtained by the third step) and multiply by it (either the given loss or the given remainder, as the case may be). It will be noticed that, in order to render the rule as wide as possible, the particular manner of applying the fourth step (*i.e.* the portions put in brackets) is not stated in the rule. This is left to be learned from the examples, which are given to illustrate the various applications of the rule.

TRANSLATED BY DR. HERBERT WEIR SMYTH.

ments in v. 434, which are rather general in character and obscure; and assert that during the eight *jñāntaras*: *Usabājñānāśā jā Suvihī*, i.e. from *Usabā* 1 to *Suvihī* 9, there existed only eleven *añpas*, without the *ditthirāśā*, which stands in the twelfth place: *muttūna ditthirāśāyaṃ hiraṃti ilkkarāśe 'ca añpāṇāṃ*. During [212] the following seven *jñāntaras*: *Suvihījñā jā Saṇṭi*, from *Suvihī* 9 to *Saṇṭi* 16, all twelve *añpas* were *cucchikkina*. But during the last eight *jñāntaras*: *Saṇṭijñā jā Viraṇ*, from *Saṇṭi* 16 to *Vira* 24, they were not *cucchikkina*.

The *dittolōia* was a second time lost: *cuch-ekhlinaō dittolōiō tahiō*. These statements are, it is true, obscure, yet become clear by means of verse 434,² which they are designed to explain. According to this verse, all three statements

² Adikanapou' nat jō (kal') pavatā U-abhas nassa.

⁷ In the commentary of Śaṅkhaśastrya, composed about 1242 (A.D. 1186) these verses are not explained, but in the MS. which I have before me they are found in the text, pp. 202, in the middle of the page, and are omitted in wit. the rest.

[illegible]

* Doubtless of secondary origin.

are valid merely for the interval between the Jinas. Their significance is as follows:—At the time of Usabha all twelve *aṅgas* were extant; between Jinas 1-9 only the first eleven; between Jinas 9-16 all twelve were lost; and under or between Jinas 16-24 they were all extant. The twelfth *aṅga* was however lost again after Jina 24.

Though these statements appear to establish the fact that the 12 *aṅgas* are said to have existed as early as the time of Usabha, nevertheless it becomes perfectly plain, from a consideration of their nature, that this claim rests upon an insufficient foundation. The commentator characterizes the degree of the *vachchhēa* during the jināntaras, which existed between Suvihī, to Saṁti, as follows:—*arhaddharma-cārttā 'pi tatra naśtā*;—a peculiar testimony, we may remark in passing, to the result of the activity of each of the seven saints 9-15.

In reference [213] to the *vachchhēa* of the twelfth *aṅga* (i.e. the *dīṭṭhivā*) which happened again after Mahāvīra, we have additional information derived from tradition.

The fourteen so-called *pūrvāṇi*, cf. Hēm. 246-247, which, according to the statements handed down to us, formed a part of this *aṅga* and which Mahāvīra is said to have transmitted to all his pupils (though only one of these, Sudharman by name, transmitted them to a pupil of his own, Jambū, the last *Kēcalin*) are said to have existed for only six generations longer. In consequence of this the six patriarchs in question, namely:—Prabhava 3, Śaṅyambhava 4, Yaśôbbhadra 5, Sambhūtivijaya 6, Bhadrabāhu 7, and Sthūlabhadra 8, had the honorary title of *śrutakēcalin*, or *chaṇḍīlāsa-purvi* (in the *Nandīs.*), *chatur-daśapūrvacāhārin*, *°pūrvin*.⁹

The following seven patriarchs:—Mahāgiri, Subastin to Vajra (Hēm. v. 35), knew only ten of the whole number, inasmuch as tradition asserts that with Sthūlabhadra the knowledge of the 4 last *pūrvas*¹⁰ (11—14) ceased. In consequence of this they are called *daśapūrvī* (cf.

Nandīs.), *daśapūrvin*; and from that point the knowledge of the *pūrvā* decreased gradually. In *anagōjavārasūtra* there is still mention of the first gradation lower, *navapūrvī*, cf. *Bhag.*¹¹ 2, p. 318 so that finally in the time of Dēvar-ddhigani, 980 years after Vīra, “only one *pūrvā* remained,” cf. Klatt, *ante*, Vol. XI., 247b 1882.¹² Also according to Śāntichandra on *ap.* 6 the *dīṭṭhivā* was entirely *vyavachchhinna* 1000 years after Vīra.

In the 9th book [214] of the *Parīśiṣṭaparcā* v. 55ff., Hēmachandra gives us a detailed account of the first loss of the knowledge of the *pūrvas*, viz. of the reduction of their number from 14 to 10. Unfortunately in the MS. (Berlin MS. or fol. 773) which lies before me, and which is rather incorrect, a leaf is lacking with v. 69-98, cf. Jacobi, *Kalpasūtra*, p. 11. After Hēmachandra has informed us in the preceding verses about Chāṇakya and Bindusāra, about Aśôka and śrī-Kuṇāla, and also about Samprati, he passes to the synod of Pātaliputra, held at the end of this “wicked” period. The principal duty of this council which was to collect the *śruta*, from all who were in possession of any portion; and it succeeded thus in collecting the 11 *aṅgas*.¹³ As regards the *dīṭṭhivā*, Bhadrabāhu was the only person to whom recourse could be had. He, however, was on his way (?) to Nēpāl (*Nēpālādēśamārgastha*) and refused the summons of the Saṁgha (which had sent two Munis to fetch him), saying that he has begun a *dhyaṇam* of 12 years, and that he could not interrupt it. The Srisaṁgha, however, threatening him, by means of two other Munis, with the punishment of exclusion (*saṁghacāhya*), he begged that capable scholars should be sent to him, to whom, at appointed times, he would give 7 *vācchāns*. The Saṁgha thereupon sent Sthūlabhadra, (v. 69) who, [215] however, after he had learned the first 10 *pūrvas*, so enraged Bhadrabāhu, that the latter as a punishment gave him the remaining four for his own personal knowledge only, and forbade him to teach them to others

⁹ Cf. Hēm. 33-34; *Comm.* p. 293 in Böhtlingk-Rien.

¹⁰ *trayāśīṣpūrvāṇi dvādaśā*, *ekādaśā* never existed according to tradition. Cf. commencement of the *avachchā* to the *Oghaṇṇapakkā*.

¹¹ *Über ein Fragment der Bhagavati*, two papers of the author in the Transactions of the Royal Academy of Sciences of Berlin, 1896 (1) & (2).

¹² I cite this article as Klatt's.

¹³ *itaś cha tasmā dushkāle karālē kālārātrivat* |

nīrvāhīrtham sādhu-saṁghas tatra niranudhār yathā
55

ananyamānaṁ tu tadā sādhuṇāṁ vismṛitam śrutam |
anabhyasamatō nasyaty adhitam dharmat. m. ap. 56
saṁghāḥ Pātaliputrē cakre dushkāle ūte khūḍe milat
yad aṅgādhyāyanādēśād yad yasya tad adade 57
tatas cha 'kalāsa' mīmāṁsī-saṁgho 'michayāt tadā |
dīṭṭhivādanantam cha ta-thau kimeha vichhatayan
58 ||

being placed first. Herein we may observe a close connection with the similar enumeration in *Lalitavistara*. Moreover all 18 are mentioned as used for the *baṃbha* bc. The 46 *māṅgalkṛhāraṇi* in *aiṅga* 4 ought to be mentioned here in this connection.

Jacobi (*Kalpas*, p. 16π) has called our attention to the **peculiar synchronism** of the activity of Devardhigani (or of Śkandha), with the contemporaneous activity of Buddhaghōṣa as regards the drawing up in writing of the *Pāli* canon. Since this latter is, furthermore, several decennia older (almost a century older than Jacobi's "adjusted date" of A.V. 780), we must conclude that in any case he must have been followed in the wake [221] by his Jaina colleagues and not *vice versa*. A great difference is manifest, it must be confessed, between both parties. While *Buddhaghōṣa* did not change the linguistic make-up of the *Pāli* texts, the redactor of the Jaina texts adapted to the requirements of his own age the *Māgadhī* language, in which, it is probable to suppose, they were originally composed (cf. in *aṅga* 3, 2, 1, the salutation *Māgadhī!* see *Bhag* 2; 250) and in which they had been in all likelihood allowed to remain by the council of *Pāṭaliputra*. The character of the language of the redactor of the Jaina texts is incomparably younger than *Pāli*,²¹ and consequently its official name *ardha-Māgadhī bhāsā* (in up. 1, 4, and elsewhere)²² or *ardha-Māgadhī* (with the Jain grammarians) bears traces of this late date. In fact, of the *Māgadhī* only a few remnants, especially the Nom. Sing. Masc. of the 1 Decl. in *ē*, have been retained, while even these disappear gradually in the course of time. In general the language may be characterized as a very much younger sister of *Pāli*. The reason for this fact must probably be sought in local influence, whether it be Valabhī or Mathurā, where the written codification was made; at least such is a safe assumption. To the dialect of either Valabhī or Mathurā these

ancient texts, composed originally in *Māgadhī*, had to accommodate themselves.

The Council of Pāṭaliputra, it is supposed, [222] limited its functions to the collection of the *aṅgas*; the written codification of Dēvarddhigaṇi, it is claimed, embraced the entire *śāstha*,²⁶ the sacred canon of this Āgama. See Jacob, l. c. p. 115–117. What position have we here to assume? In *aṅga* 3.41 we find *āṅgaśūcī* texts expressly recognized as different from the *aṅgas*, and as *pramāṇa* of this kind the names of *apāṅgas* 5–7 are mentioned, together with a fourth name, which is that of a section in *apāṅga* 3. In *āṅga* 3.10 ten *śāstra* texts, each comprising 10 *ajjhayogas*, are enumerated, of which we possess only four, as *aṅgas* 7–10, and a fifth, as *śāhāśūcī* 4. In *aṅga* 4 there are mentioned, besides the 11 (or 12) *aṅgas*, the names of the 36 sections of the first *maṇḍita*, and three other texts, which are no longer extant; the last occur only in a statement in reference to the number of their *ajjhayogas*. A real enumeration of those texts, which besides the *aṅgas* belong to the *śāstra* (*śruti*) is not found in the *aṅgas*, but in the *Nandīsūtra*, a work that is probably a production of Dēvarddhigaṇi himself. See below. In this work the sacred texts are divided into two groups: (1) the *aṅgaparittā*, i.e. the 12 *aṅgas*, and (2) the *anāṅgaparittā* texts. A further subdivision shows that under *anāṅga*, there are 60 single texts enumerated, 27 of which prove to be names of existing parts of the *Sūtrānta*; the other names appear either to be merely titles of sections of single texts of this number (223), or, and this is the majority of cases, are not found in the *Sūtrānta*, though *aṅga* 3.10 is acquainted with some few of them. A repetition of this enumeration in the *Pāṭalīkāsūtra*²⁷ adds at the end to the latter category four²⁸ additional texts, the former existence of which can be proved from another source. Inasmuch as this proof is as entirely free from suspicion as it is surprising I deem it fit to

²⁴ cf. Bhagur 1, 392-7, Vorlesungen über indische Lit. (Gesch. 2, p. 316).

25 *śā kṛm tām bhāṣāṃ pṛāṇāṃ ādharā Maṇḍitā*
bhāṣī bhāṣaṃ, ādharā ānandā pṛāṇāḥ — Also
 according to *upaniṣad* 1.50 (see Lohmeyer, *op. cit.*, p. 6)
 Māhāvira himself already preached in Artha-Maṇḍitā —
 Accordingly we read in the quotation given by Hare-
 chandra IV. 287: *pṛāṇāṃ ādharā pṛāṇāḥ ādharā*,
hṛīṇ sūttam; cf. Pischel's note on 1.50 (p. 82) in his
 translation, p. 109. The only *pṛāṇā* for *pṛāṇāḥ* found
 with Hemachandra is *bhāṣā*.

2. Other synonyms are *gr̥ṇta*, *sūtra*, *gr̥ṇthā*, *sāsana*, *ājñā*, *vachana*, *śāśana*, *prajñāpanā*. Such is the custom in the *śāstraśāstra* (but in Prakrit.)

²⁷ Where the texts in question are called *anviti-
badda*.

28. Or, if not, they seem to have been mentioned only by the original MS. commented on by the *bioblioth* of the *Universitätsbibliothek* in the *Nachtr.*; see the explanation of the five names in the edition, p. 418 (after *Vanderhaeghe*).

discuss this matter already here in some detail.

In the *Vihāṅgaparā*, called briefly *Vāḍḍipapa*, that is to say, in a *samāgārī* of *Jinaprabhā* (Jinaprabhā in Kōśa; likewise author of the *saṁdehaviśvavahā*) composed *Samvat* 1303 (A.D. 1307) in *Prākṛit*, the above mentioned enumeration of the *anāṅgaparīṭṭha* texts is found, with the addition of the same four names as in the *Pāṭhikāśūtra*. To these four there are added two more names. On this occasion we now find there, inserted between *ānā* and *upāṅga*, the following remarkable statements in reference to that state of advancement in which the student is to study the single texts. The statement occurs in a passage where the author describes in detail the diurnal occupation necessary to learn the single texts of the *Siddhānta*. The passage is as follows:—

“*attha cha dakkha²”* pariyāyena tivaso āvarapakappānī, vaḍḍiṇṇa vāṇṇa ya, ēvaṁ chaūvaso sūyagadān, pañchavasō dasakappavavahārō, arthavasō thāpa-samavāc, dasavāsō bhagavañ³ (vāṇṇi), Akkasavāsō khuddiyāvimāṇā⁴ (nāḍḍi) pañcha bhayāṇē, vārasavāsō aruṇovavāyāi (ādāni)²²⁴, pañcha jḡbhayāṇē, tērasavāsō utthāpasuṇya (yādne) chaṇḍarajbhayāṇē, chaṇḍdasāi-atthārasatavāsō kamēṇa āśivisabhāvaṇā-ditthivisabhāva-śelāta - mahāsumiḡabhāvaṇā - vāṇṇi-saggē, ēgūpavāsavāsō ditthivāyaṇ, samānāvisavāsō savvasuttajōgō tti. The same statements recur in an older form (cf. the name *śelāta* for *śelā* 5 and not *bhagavā*) in Santichandra's Comm. on *upāṅga* 6 in 7 verses, the first two of which are found in Abhayadēva on *āṅga* 3:—

¹ MS. has *dakkha*. But *Vesānta* is of course a Sanskrit corruption. Is *dakkha* (daksṣa) the correct reading or not? neither seems probable.

² *ādāni* is another name of the *śelā* book in the

bārasavasassa taḥā aruṇovāyāi pañcha aṇḍha
yaṇā |
tērasavasassa taḥā utthāpasuṇyāyā chaṇḍō || 4 ||
chaṇḍasavāsassa taḥā āśivisabhāvaṇam jīnā
būnti |
panmarasavasagassa ya ditthāvisabhāvaṇā
taḥā ya || 5 ||
sōlasavāsān ya ēgattaravuddhiēsu jahasaṇ-
khaṇ |
chāraṇabhāvaṇa - mahāsumiḡabhāvaṇā-tēgani-
saggā || 6 ||
ēgūpavāsagassa ditthivāḍ dāvālasaṇḡam |
sammānavi-savāsō aṇavā savvasuttassa
tti || 7 ||

This enumeration is exceedingly noteworthy, from the fact, that of the texts which now belong to the *Siddhānta*, only nine are mentioned (six *āṅga*s and three *chhēlasāntas*), whereas the other eight names, to which reference will be made later on when we examine the *Nandī*, are at present not found therein. The question [225] arises: are we justified in placing the composition of these verses²² at a period in which the remaining portions of the present *Siddhānta* were as yet not embraced therein, their place being occupied by the eight lost texts, which are mentioned in the enumeration? In any case the enumeration cannot be otherwise than ancient, since at the date when it was composed, the *difficilia* manifestly still existed, and in fact as the highest in the order of gradation.

If we now return to a consideration of the 60 *anāṅgaparīṭṭha* texts of the *Nandī* we shall find that we have to deal with a rich literature of which nearly half has probably been lost. On the other hand, among these 60 texts we miss not only at least six names which are now enumerated as portions of the *Siddhānta*; but all the titles of those groups are lacking, in which the *Siddhānta* is at present divided. These 60 names are enumerated without any reference whatever to any definite order in groups, and in a succession entirely different from the present order. Does this state of things permit us to conclude that neither the texts which are not mentioned in the enumera-

Bhagavā, the latter in its turn being *dasavāsassa*.

²² Santichandra maintains a different view, viz. that since in *v. 1* *cap* 5 is ascribed to *dānāśhopanaprasaśit*, then *parīṭṭha* at 6, and the connected *aphant* 6 took their places accordingly. But how is the case with *u* 7 etc.?

tion nor the present groupings or titles of groups existed at the date of the *Nandī* :

At present the entire *Siddhanta* embraces the following 45 texts³³ divided into the following six groups : 1. eleven (or twelve) *aṅgas* : [226] Āchāra, Sūtiakṛitam ('kṛit), Sthānam, Samavāya, Bhagavatī, Jñātādharma-kathās, Upāsaka-dāśas, Antakṛiddāśas, Anuttaraupapātikadāśas, Praśnavyākaraṇam, Vipāka, (Dṛiṣṭivāda, no longer extant),—2. twelve *upāṅgas* : Aupapāitika, Rājaprasāṇyam, Jivābhigama, Prajnapānā, Jambudvīpaprājñapti, Chandraprajñapti, Sūryaprajñapti, Nirayavali [or Kalpikā], Kalpavataṇṣikā, Pushpikā, Pushpachulikā, Vṛiṣṇidāśas,—3. ten *pananas* : Chatuṣṣaraṇa, Saṁstāra, Āturapratyākhyānam, Bhaktaparijñā, Taṇḍulavaiyali,³⁴ Chandāvijja,³⁵ Dēvēndriastava, Gaṇiṇijja,³⁶ Mahāpratyākhyānam, Vīrastava,—4. six *chhēdasūtras* : Nisītham, Mahānisītham, Vyavahāra, Daśāsrutaskandha, Brīhatkalpa, Paṭchakalpa,—5. two *sūtras* without a common name, Nandī and Anyōgadvāram,—6. four *mūlasūtras* : Uttarādhyayanam, Āvaśyakam, Daśavaikālikam and Piṇḍaniryukti. This division is that of Buhler, (see Jacobi, *Kalpas*, p. 14), with an exception in the succession of *up.* 5—7, where I have deviated from his arrangement on the strength of the *Vidhiprapa* and the scholium on p. 6. The same division is found also in *Katamsāgara* (Calc. 1880) except that there groups 3 and 4 have changed places with 5 and 6, not to mention some minor differences. It is a very remarkable fact that in Rajendra Lāla Mitra's *Notes of Sanskrit MSS.* 3, p. 67 (Calc. 1874)—on the authority of a definite source of information, the *Siddhanta-tharvasāda*,—we find an enumeration³⁷ varying materially from the above. First a very different grouping may be noticed: [227] secondly, there are a few additional names (50 instead of 45) and finally remarkable variations in the names themselves. The first two groups of *aṅgas* and *upāṅgas* are identical, although

aṅga 10 has changed place with *aṅga* 11, and the name of *upāṅga* 12 having fallen out, in its stead another name (*Kappiyāsūtra*) has been introduced in the ninth place.³⁸ The four *Mula-sūtras* appear as Group 3, and of these two have different names (2. *Vīśeshācāryaka*, 4. *Pākshika*). Group 4 bears the title *Kalpasūtras* and consists of five texts, viz. : *mūlas*, 1. *chhēdas*, 1 and 3, *Kalpasūtra* (part of *chhēdas*, 4) and *Jivakalpasūtra*. Group 5 embraces 6 *chhēdasūtras*, of which the first three alone are perhaps identical with *chhēdas*, 1; the fourth corresponds to *mūlasūtra* 4 of Buhler. The names are : 1. Mahānisīthavyāhādvāchanā, 2. Mahānisīthalaghuvāchanā, 3. Mahānisītha (not in Rajendra Lāla Mitra, but in Kashinath Kunte) Madhyamavāchanā, 4. Piṇḍaniryukti, 5. Anghaniryukti, 6. Paryushayākālpa. Group 6 : the ten *panana* or *panana* texts, but in a different order. The *Maraṇasamādhi-sūtra*, which is in the eighth place, takes place of *panana* 10. *Nandī-sūtra* and *Ananyōgadvārasūtra*, counting separately as groups 7 and 8 respectively, conclude the list. If, now, [228] after a consideration of the above, it is manifest that even the parts of the *Siddhanta* are at present uncertain, we have herein a sure proof of the unsettledness and uncertainty which attaches to the entire writings of the Jains. As a matter of fact it is apparent that the oldest portions of their literature are in reality nothing but *disjecta membra*, that they are very unequal and, as regards the date of their composition, separated from each other by extensive periods.

In the *aṅgas* and *upāṅgas* we may observe groups, which are well defined, individual, and united through criteria which prove their interconnection. These groups were in a later age brought into connection with the other groups of like nature.

On the other hand, it cannot be denied that a hand, aiming at unification and order, has been brought to bear especially upon the *aṅgas* and

³³ These are probably the "45 *pananas*" which the citation of the writer of a MS. (Saurvat 1666, A.D. 1609) of the *Vya-ākhyānaśāstra* (Berlin MS. or. fol. 1038) had (p. 1) ; see v. 10 of the statements at its end.

³⁴ These names, both as regards form and signification, are either of doubtful explanation, or are involved in obscurity.

³⁵ Repeated in the "Report on the Sanskrit MSS. of the Government of India" addressed to the Government of India by Prof. Kashinath Kunte. He has given

the report twice with tolerable similarity—Jan. 24 1881 (p. 47) and June 6, 1881 (p. 6—9).

³⁶ Here Kashinath Kunte deviates from Rajendra Lāla Mitra, adding the common name of *up.* 12, but in the ninth place. A further variation is that in the place of the *Chandaprajñapti* he adduces the *Mahāpratyākhyāna*, which is found in the list of the *ananyōgadvāra* texts in the *Nandī*. The *Mahāpratyākhyāna* is characterised as "obsolete and extinct" by Kashinath Kunte.

apāṅgas. This is clear from the many remarks in reference to the redaction (*Lhaṅga*, 1, 389), which consist partly of the parallel references of one text to another, partly of *kāṇḍās* which are placed at the beginning to serve as a general introduction or inserted in the middle or subjoined at the end. The linguistic character of those redactionary remarks can be readily distinguished from that of the text. Among those parallel references, there are doubtless many, which are to be ascribed, not to the redactor but (cf. below) to the copyists: and among the *kāṇḍās* may be contained many additions of a decided secondary stamp. If now we do not discuss at length the problem as to whether we are to consider all the 45 *āṅgas* of Bühler's list as collected by Dēvarddhigaṇi, [229] as is the belief of Jacobi, *Kṛpās*, p. 16, we must accept *this* as a fact: that their present state cannot be that to which they were possibly brought by him. Despite the firm foundation erected by his activity, and despite the care which the Jains especially have, even from the earliest times, devoted to the restoration of their MSS., nevertheless both the constitution and condition of the *Siddhanta* text have been subject to most important modifications. Jacobi, p. 16, 17, has called attention to the numerous pāthas (various readings) recognized in the Scholia, and has expressed it as his conviction that it is impossible to restore Dēvarddhigaṇi's recension or text. There exist however other differences between the original and the present *Siddhanta* text. Not only have there been lost passages or sections of the text, which were extant at the date of the older commentaries, but also there have been inserted large interpolations which are apparent: and furthermore the text, according to all probability, has even suffered complete transformations. I conjecture that the reason of these changes may be sought in the influence of the orthodoxy of the *Siddhanta* sect,² which became more and more unbecoming to the various divisions of sectaries. The existing *Siddhanta* belongs exclusively to the *Siddhantarasas*. The loss of the entire *dhishṭi-cāda* (cf. below), is doubtless principally due to the fact that it had direct reference to the doctrines of the schismatics. This point

of view may afford us an explanation for the omissions, additions and transformations in the constitution of the other *āṅgas*. The [230] rigour of the polemic against the *annaat-chāṅga*, *angutārthika*, *parapā-aṅga* and against the *nīlhaṅga*, *nīlhaṅga*, is so sharp and cutting, that we are justified in drawing ulterior conclusions, which are of significance for the history of Jain literature.

Thus we have seen above, page 222f, that of works mentioned in *āṅgas* 3 and 4 with special reference to their contents and extent, eight are no longer extant, as is also the case with some 30 of the 60 *avāṅga-parivṛtta* texts mentioned in the *Nāolisūtra*, etc. Again, it is a definite and certain conclusion that the *mahāpāṇḍa* chapter of the first part of *āṅga* 1 long formed an integral part of that *āṅga* before it was lost, as is at present the case. The *nīlhaṅga-parivṛtta*, which originally belongs to the second part of that *āṅga*, has been removed thence and given an independent position, that is to say, it exists, according to all probability, as *chhēlasūtra* 1. Some verses, which originally had their place at the end of the first chapters of *apāṅgas* 5 and 7, and which the scholium ascribes to that place, are now not extant. On the other hand, there is no lack of insertions:—At the date of the fourth *āṅga* (§84) the fifth had not yet attained the half of its present extent (84,000 instead of 184,000 *padas*). The addition of certain portions called *chālās* (protuberances), is expressly recognized by tradition as having taken place partly in *āṅga* 5 (*cicālochālā*) partly in *āṅgas* 1 and 12 as also in *mūlasūtra* 3. In the case of *chhēlasūtra* 4 we have a certain instance of a growth out of manifold constituent parts. Besides these changes, be they omissions or additions, there are traces of evident textual transformations. The statements in *āṅga* 3, 10 in reference to the contents of *āṅgas* 8—10, are drawn from a text quite different from our own. Furthermore [231] the statements in reference to the extent and division of all the 12 *āṅgas*, to be found in a detailed discussion of the subject partly in *āṅga* 1, partly in the *Nāoli*, are oftentimes in unison neither with each other nor with the actual constitution of the text. Even the modern representation of the *Vidhiprapāḍa*, dating from

² A patent example of this inflexibility is to be found in the *Kopāśhalan* *chāṅga*.

the commencement of the fourteenth century, shows extensive variations in the case of *aṅga* 6. It is furthermore to be noticed that chapter 16 of the first part of *aṅga* 2, has a title which does not comport with the character of its contents. The same may be affirmed of *aṅga* 10, the commentary to which refers to a textual division no longer in existence; nor does this *aṅga* contain the same dialect as the others. Finally, the name of the second *upāṅga* does not harmonize with its traditional explanation, which, in turn, stands in no genuine relation to the contents of the *upāṅga*. In this latter case there exists perhaps some connection with a Buddhistic text of similar denomination, to which we may, in the last instance, ascribe some influence in bringing about the transformation of the text. We have seen that the constituent parts of the text in general have been exposed to modifications of the most varied character; and the same, we can confidently assume, has been the case with the state of the text itself. The peculiar style of these works in the first instance is to be held responsible for this result. The massiveness and ponderosity especially of the presentation by means of continual repetitions and constantly recurring stereotyped forms, has often sorely tried the patience of the Jain clergy. All the precautions which were taken by the division of the text into *granthas*, that is to say, groups of 32 syllables³⁵ and by counting the latter by hundreds [232] or by thousands, which precautions according to Jacobi, *Kalpas*, p. 24 emanated from Dēvarddhigaṇi himself, have not been able to protect the text against the insertion of single words, or against abbreviations and omissions. The latter were then made good by reference to the parallel passages in other texts, cf. p. 228. All this, together with the dangers accruing from the constant copying of the MSS., has produced a state of confusion which is utterly irremediable. Often the catchwords alone, the skeletons of the page so to speak, are left, and that which must be supplied is to be found in the preceding, which was identical in tenor. The omitted portion was thus left to oral delivery or to oral instruction. The allusions to certain stereotyped descriptions, the *epitheta ornantia*, the so-called *cannaḥ*, *varṇaka*, are

doubtless to be referred to the period of the redaction.

So the **text itself**, as we see, has met with enormous losses in the course of time; also the **form of the words** has suffered equally. I do not refer here to the frequent *pāthas*, of which mention has already been made and which were intentionally changed from reasons of the most various character, but to the form of the words itself. The Prākṛit of these texts was, as we have seen, page 221, afflicted in the very beginning with "a thorn in the flesh." Its origin is to be sought in the East of India, in Magadha, and it was therefore provided at the start with those peculiarities, or at least with a good part of them, which belonged to the *Māgadhī* dialect, according to the testimony of the old inscriptions and of the tradition of the later grammarians. These texts were collected for the first time [233] by the Council of Pāṭaliputra probably in that dialect, and after 800 years' transmission by word of mouth, if we trust the voice of tradition, were codified in writing in Western India. In this codification the attempt was doubtless made to preserve a part of the ancient grammatical form, particularly the termination of the Nom. Sing. Masc. of the 1st decl., in *ē* not in *ō*. Such was the ancient colouring of the language of the "Scriptures," as the texts were now called. But, aside from this attempt at preserving an ancient flavouring, it may be stated as a general proposition that the texts were written down in that form, which the language assumed at the time and place where the written codification took place. In the case of those texts which were then not merely collected or compiled from ancient material, but newly created by the sole assistance of this ancient material, the desire to preserve the ancient form held good merely as regards the ancient citations. The remainder of the contents, including the notes of the redactor and his additions, was at the outset, composed in the new form (i. g. Nom. in *ō*, not in *ē*). This then remained for the future the only authoritative form which, as far as can be discovered, was imperfect and contaminated by the most varied defects. No reference was paid to a substructure of grammar, and the flexibility of the rules as regards flexion or non-flexion recalls the latitude which

³⁵ Also called *śikṣā* or *anushṭubh*. See *Ind. Streng.* III. p. 212.

the Prākṛit grammarians of a later age [234] ascribed³⁹ to the *Apabhraṃśa* in this particular. In compounds the single members are either entirely without Saṃdhi, or the case termination is lacking in the latter member, so that it stands, like the other members, in its pure thematic form. The pure theme especially is frequently found instead of the inflected forms in the *kārikās*, which are inserted into the *aṅgas*. The gender and number of the words which are associated, do not agree in a very large number of cases.⁴⁰ The insertion of an inorganic *m* in the middle of compounds and at the end of a word, is a recognized practice. Corresponding occurrences or rather beginnings of such a use are found even in ancient times, and in fact in the *Vēda* (cf. *śatanūti*). The use of the particles *tō* (from *atō*) and *ō*, *tu* and *u* as mere expletives, is exceedingly common. The indiscriminate variation of *i* and *u* with *ē* and *ō* before double consonants makes many passages obscure and difficult. If to these considerations we add the so-called *yaśanti* it is apparent what a wide field is opened up for the disfigurement of words. There is, however, one circumstance more, and that of a very peculiar nature. By reason of the falling out at any time of a *t* in the frequently recurring forms of the 3rd pers. Singul. Pres., and of the Part. Perf. Pass., a misunderstanding arose in the minds of the copyists, which is only to be explained from the fact that there was no absolutely established grammatical use. This misunderstanding arose from the belief of the grammarians that *t* was a sound [235] that could be omitted or inserted at pleasure. The insertion of such an inorganic *t* in time gained ground so extensively, that the recognition of the original form becomes a matter of exceeding difficulty. As a matter of fact it can be proved that this situation of affairs led even at quite an early date to grotesque misunderstandings⁴¹

As the result of all this many words of the texts are exceedingly corrupt. We find therefore it almost beyond belief when we consider the nature of the licenses which modern Jain authors allow themselves when they write Prākṛit. In the scholia all matter of this class is explained simply as *chhāṇḍasa*, or *ārsha*. If now, despite the above great transformation of the constitution and condition of the text of the *Siddhānta* since Dēvarddhigaṇi, it is always difficult in a given case to demonstrate the posteriority of any definite text after him, there is nevertheless, [236] in the contents a sufficient number of dates which correspond exactly, or at least tally well, with the period in which he is placed by tradition, namely the fifth century A.D.

Of the evidence of this character we must first mention the astronomical and astrological conceptions, which are anterior to the authoritative influence of Greek astronomy, or at least in all essentials independent of it. There is as yet no knowledge of the Zodiac; the planets are not arranged in the Greek order (as is the case in several of the Ath. Pariś.), and play a very unimportant part. The *nakṣatras* and the Vēdic *yuga* of five years still hold sway. The *nakṣatras* are often found, arranged after the old order, starting with *kṛittikā*. At the same time we find in the *upāṅgas* the change of the vernal equinox from *kṛittikā* to *bharaṇi* indicated by the commencement with *abhiṣit*, which is such a favourite in the *upāṅgas*.⁴² In this fact we have a sign that the influence of Greece had already become active. In general, however, the statements of the *upāṅgas* still represent the stage of the so-called *Jyōtiṣham* and of a part of the *Atharvaparīṣiṣṭas*. The names of the *karāṇas* that have a foreign sound:—*hara*, *bāhara*, etc. belong, it is true, to the *upāṅgas*; *hārā* is found however for the first time in *paṇina* 8, v. 69.

We must also mention the enumeration of

³⁹ A perfect analogy is presented by the peculiar Sanskrit of the North Buddhist texts: *Lalitavistara*, *Mahāvastu*, etc.

⁴⁰ Just as in the texts of the *Arasta*, especially the *Vāṇanāṭa*, which were collected at about this period.

⁴¹ All sorts of false forms which had no claim to existence come gradually into use in this way. An interesting case of this, which, if my conception is correct transplants us into a period before *Vardhamāna* A.D. 504–527, will be found in the name of the metre *śrīgītā* in *paṇina* 2, 1, 2. The title of the first *upāṅga* is incorrectly stated to be *apapāṭika* instead of *śikha*. The name *Māṅga* (*Māṅga*) became *Māṅga*, the

common form. In my treatise on the *Sāhitya* Māh. p. 34, when I had no knowledge of this inorganic *t*, I conjectured *Māṅga* to have originated from *Māṅga*. The Schol. on *anaga* 2, 2, 7 has, it must be confessed, *Māṅga*. Furthermore the later Jains have been guilty of all sorts of wild mis-conceptions in reference to their own language: as for example, the completely erroneous explanation of the name *śikha* by *śikha*. In this category we may perhaps place *lubbaka* for *Lubbaka*.

⁴² So also in *anaga* 3, in *anaga* 4, 7 probably in an interpolation. The names of the *nakṣatras* appear, we may notice in passing, here only in their secondary form, thus,—*paṣṣya*, *bhadrāpata*, etc.

the foreign, non-Aryan peoples, [237] which are frequently referred to in the *aṅgas* and *upāṅgas*. This enumeration transplants us with tolerable certainty to a period from the second to the fourth century A.D., which is the most ancient period in which the enumeration can have originated, though the present texts may be much later. The mention made of the Arabians among the list, in the form *ārava*, which has yet not been discovered as occurring elsewhere in India, might lead us to suppose that we had to deal with a period far posterior to that delimited above. This could, however, be the case only on the supposition that the Arabians of Islam are referred to. It is my opinion that a reference to an ante-Islamic period (in which Arabia and India were closely connected by commercial ties), is as fully justified as a reference to the Islamic period. From the mention of this peculiar denomination of the Arabians, which as before said appears here for the first time in the history of Indian literature, I conclude that the first author of the enumeration in question lived in a part of India in which the commercial connections with Arabia were very close, that is to say, on the west coast. The mention made of the seven schisms in *aṅga* 3, the last of which occurred in the year 584 Vira, compels us to regard the second century A.D. as the extreme limit *à quo* for the composition of the texts of the *Siddhānta*. We have therefore to conclude that the period from the second to the fifth century is the period to which their composition must be relegated.

The other dates, which we can extract from the texts, are in agreement with this delimitation of the period of their origin; of special importance are the references in the *aṅgas* to the corpus of Brāhmanical secular literature [238] which existed at that time, see *Bhagav.* 1, 441; 2, 146-8. Then too the use of the word *aṅga* to denote the oldest portions or the chief group of the *Siddhānta*⁴³ deserves attention, and makes probable the assumption that the period of their

origin is the same as that to which belong the Brāhmanical *aṅgas* and *upāṅgas*, often alluded to in their most ancient portions. The second of these two names (*upāṅga*) has been adopted by the Jains as the title of the second chief group of their texts. I have already called attention to the close connection between the astronomical doctrines of the *aṅgas* and those of the "*Jyōtiṣa*" *cēdāṅga*. Finally may be mentioned (see *Bhagav.* 1, 383) the solemn composition in the *ārgā* measure⁴⁴ of verses which are cited in the *Siddhānta* or inserted therein. This measure must at the time of the redaction of the *Siddhānta* have enjoyed especial authoritativeness, otherwise it had never been made so exclusive a vehicle of composition. We must however call attention to the fact that the oldest metrical portions of the texts are not composed in *gāthās* but in *ślōkas*: thus *aṅga* 2, the metrical portions of the *chhēdasūtras* and those of *mūlasūtras* 1 and 3 [239] are composed in *ślōkas*, while the *nijjatti* and *chōrpi* belonging to those *mūlas*, are in *gāthās*. In *aṅga* 2 we find also the *raitālīga* measure. The name of this metre (cf. *ad loc.*) which exists even in the "*Chhandas*" *velāṅga*, appears to have been caused⁴⁵ by a misunderstanding of the name of a chapter of this *aṅga*, brought about by the insertion of an inorganic *t*. The existence of the name of this chapter of the *aṅga* would receive by this supposition a valuable attestation, inasmuch as it dates far back to a very remote period. In *ślōkas* and *raitālīgas* are composed the verses of the *Dhammapada* of the Buddhists, with which several portions of this *aṅga*, as well as of *mūlasūtras* 1 and 3, are very closely connected.

We come at this point to a question, which I will here merely mention. What is the relation of the *Siddhānta* of the Jains to the sacred writings of the Buddhists, both northern and southern? A few sidelights of this character will be brought into use as the course of our investigation progresses. The solution of the question can only then be successfully

⁴³ The Buddhists in the case of the chief group of their own scriptures make use of the word *sūtra* to denote a class of literature of somewhat ancient date. The word *sūtra* occurs also in the colophons of the *Jaina-Siddhānta* and plays a very important rôle in the Scholia, yet is never used in the texts themselves with the same significance as among the Buddhists, if we except the *Aban-ādāyāras*, and *Jesay-nijjatti* together with that section of *aṅga* 12 which has the specific title of *sūtra*. See *Bhag.* 1, 441; 2, 146, 247 and *Forbes, über Ind. Lit.*

Geisch. 316. The style of some of the oldest parts of the *Siddhānta* reminds us in a very slight degree of that of the later Brāhmanical *sūtra*. In reference to the connection of somewhat problematic character, between *śāṅkya* or *śāṅkya* and *śāṅkya* *śāṅkya*, see *liter* on under *aṅga* 1, or in *Uttarādhy.* 16.

⁴⁴ There is frequently a great lack of metrical correctness in these verses.

⁴⁵ The metre in question existed earlier as may be seen from its use in the *Dhammapada*.

undertaken, when we are in a position to compare the texts themselves.

The following review of the contents of the *Siddhānta* endeavours, in the first place, to disclose to us the actual constitution of the texts which are at the present day reckoned as belonging to the *Siddhānta*. In this review I follow the order adopted by Bühler (see above, page 226). Secondly, it purposes from the dates contained therein to cast light upon the most important points for the date of the composition of each single division, and for the life of the founder [240] of Jainism, as far as this is possible for me in this first assault upon its literature, remarkable not less for its immensity than for its monotony and intellectual poverty.

The more exact details will be found in the second part of my catalogue of the Sanskrit and Prakrit MSS. of the Royal Library of Berlin, which is at present in the press.^{16*} I have unfortunately been able to make use of the editions of *aṅga* 10 and *upāṅga* 2 alone out of the Calcutta and Bombay editions of the *aṅgas* and *upāṅgas*, published 1876 ff.

At the conclusion of this introduction it may be permitted me to state that personally I still continue to regard the Jains as one of the oldest of the Buddhistic sects.^{17*} The fact that the tradition in reference to the founder of Jainism deals partly with another personality than Buddha Śākyamuni himself—with the name of a man who in the Buddhistic legend is mentioned as one of the contemporary opponents of Śākyamuni—this fact, I say, does not, in my opinion, militate against the conclusion that Jainism is merely one of the oldest of the Buddhistic sects. It appears to me that the conception of the founder of Jainism as an opponent of Buddha can well be regarded as an intentional disavowal of religious opinion which took its rise in sectarian hate. The number and the significance of common features in both Buddhistic and Jain traditions in reference to the life and labours etc. of each

of their founders outweigh any arguments that make for the contrary opinion. If we reflect—and I here repeat what I have said on page 219—that the Jain texts were, as the Jains themselves claim, codified in writing 1000 years after the death of the founder of Jainism, then it is really marvellous [241] that they appear to contain so much that is original. How large the number and how influential the character of the events which occurred in the interval, is for the present veiled in obscurity, although the information emanating from the Jains themselves (or more particularly from the Śvētāmbaras with whose literature we have specially to do) in reference to the seven schisms etc.¹⁸ affords us at least some slight base of operations. One fact, for example, is noteworthy:—that the nakedness, which is adduced by the Brahmins (e.g. also by *Varāha mih.* 58, 45, 59, 19) as a chief characteristic of the Jains, and which according to Buddhistic statements, was resolutely opposed by Buddha, assumes an unimportant position in the *aṅgas* and at least is not regarded as a matter of necessity, see *Bhag.* 2, 187, 239, 314. Later the necessity of appearing naked was introduced as a dogma by a sect of dissenters. If we take into consideration the hate which the Śvētāmbaras, who played the rôle of the orthodox sect, manifested so vigorously against the Digambaras in particular¹⁹ (*Kup.* 797 7), it is no rash conjecture to assume that many prescriptions or traditions in regard to this point have been removed from the *Siddhānta* of the Śvētāmbaras. Even the orthodox do not deny that the Jinas themselves went naked;²⁰ they assert merely that, what was permissible then is no longer permissible at the present day.

At the head of [242] the *Siddhānta* stand then :

a. The 11 (or 12) *aṅgas*.

We have seen above on page 211 ff. that, according to tradition, at the time of the first Jina all 12 *aṅgas* were extant; that then be-

^{16*} Of this new catalogue Vol. I has since appeared under the title: *Die Handschriften-Verzeichnisse der k. u. l. Bibliothek zu Berlin*, Vol. V Part II, Vol. I 352 pages: see *ante*, p. 316. Vol. II, p. 353-828, which is particularly devoted to the sacred Jain literature, is nearly ready.—L.

^{17*} This view (which in Europe has apparently persuaded only M. Barth of Paris) will scarcely be maintainable any longer, since Prof. Bühler has discovered inscriptional proofs for the authenticity of the old Thera lists given by the *Kalpasūtra* see the two papers by Bühler in the *Wiener Zeitschrift für die Kunde des Morgenlandes*,

Vol. I, p. 165ff. and Vol. II, (111), p. 1ff.—L.

¹⁸ According to v. 43 of Dhammaghoṣa's *Kālasūtrī*: *tērasa-saṃm* (1300) *Virā* *bhoṃtati anēgaṃ māyavibhā* *bandhaṃti jetaṃ jivā bahuhā kaṃkhā mōhamam*.

¹⁹ *desavisaṃvādino dravyalingenā bhōdinō nīnavāh*, *Botikā* *tu sarvavisaṃvādino dravyalingato 'pi bhinnāh*, according to the *Vichārāṃpita-saṃgraha* in *Malayagiri's Comm. to Aśva*; cf. Jacobi, *Kalpas*, p. 15n.

²⁰ See Wilson *Sol. W.* 1, 294 ed. Rost in reference to the nakedness of Mahāvira cf. also the characterization of his doctrine in *aṅga* 3, 9 fin. as *ack'la*.

tween Jinas 2—9 there existed only eleven *i. e.* all except *aṅga* 12; that between Jinas 9—16 those eleven also were lost, whereas in the time of, or between, Jinas 16—24, all twelve were extant, and that the 12th afterwards was again⁵¹ lost. If we exclude the mythical first Jina from our consideration, the essence of this tradition is perhaps this: the number of the *aṅgas* was at first eleven, to these a twelfth was joined, which twelfth *aṅga* was again lost. This assumption corresponds to the conclusions to be derived from the *Sūbhānta* itself. In the *aṅgas* themselves and in the *upāṅgas* too,⁵² only eleven *aṅgas* are as a rule mentioned. The principal exception to this assertion is the fourth *aṅga*, where at the very outset we find a short enumeration (which can easily be shown to be of secondary addition) of the single parts of the *ducalasamgaṇa gaṇipīḍagaṇa*; alike in §§18, 46, 88, some declarations in reference to *aṅga* 12; and finally at the end a detailed exposition of this subject, in which the *ducalasamgaṇa gaṇipīḍagaṇa* is glorified as having existed eternally in the past and as destined to exist forever in the future. This laudation of *aṅga* 12 is very surprising, and may well be explained as an intentional polemical assertion to satisfy all doubts that might arise. According to all probability this last section, which is found almost *verbatim et litteratim* in the *Nandī*, composed probably by Dēvarddhigaṇi himself, [243] is to be regarded as a later addition to *aṅga* 4, whether it was borrowed from the *Nandī* itself, or, if this cannot be the case on account of some few differences between them, from a common source. Besides this mention in *aṅga* 4 and some other references, which eventually may also be of secondary origin (*e. g.* *aṅga* 5, 20, 8) the *ducalasamgaṇa gaṇipīḍagaṇa* is mentioned only in those portions of the *Sūbhānta* which do not belong to the *aṅgas*.

The later origin of the passages in question is manifest from the form in which they are referred to.

When anything is said of the eleven *aṅgas*,

⁵¹ Accord. to *Bhagav.* 20, 8, *aṅga* 12 was lost *savattatha*, *i. e.* in all 23 *mantras*, as Leumann informs me.

⁵² But see *up.* 1, 26 (p. 36, Leumann).

⁵³ *Sāmāyika-māhātmya* *i. e.* *sāmāyikadīni*, see *Bhagav.* 2, 281-3, 300, *up.* 1, 31 remains an exception (Leumann, p. 44).

⁵⁴ cf. *Pāṇ.* 5, 4, 34 where in the *gaṇa*, *saṃaya* and *saṃayāchāra* are found, also *samaya* (var. 1); the form *sāmā* might be regarded as an intentional differentiation for *sāma*: cf. the *ākṛitigaṇa amosatikṭa* as also *sāmgrāhika*, from *saṃgraha*, in *Abhayadeva* on *aṅga* 4, who even uses *svāsāmāyika* as the adj. to *svāsāmaya*. The

they are always characterized⁵⁵ as “beginning with the *sāmāyika*,” in case the statement is not merely limited to this number itself, but when the first one is specifically referred to by name. When, on the other hand, anything is said of twelve *aṅgas*, in which case the titles of each and all are generally cited, the first *aṅga* is not called *sāmāyika*, but *āchāra* (*e. g.* also *aṅga* 5, 20, 8); the latter name is found in the MSS. and elsewhere up to the present day. This direct variation between the two forms of denotation is peculiar and surprising, but may perhaps be explained as follows:—The word *sāmāyika* was perhaps originally a synonym of *āchāra*. I derive⁵⁶ it from *saṃaya* and hold that it is equivalent to the Brāhmaṇical *sāmāyāchārika* (see M. Muller, *Hist. Anc. S. Lit.* p. 206 fg.) which here appears probably [244] in the term *sāmāyāri* (see *Uttarajjh.* 26). This may be regarded as a counterpart of *sāmāyāchārika*. In *upāṅga* 1 at the end of the first part, the *dharma* of Mahāvīra is designated in a general way as *sāmā* or as *agārasāmā* *dhammē* and *anagārasā*. The use of the word in this universal signification in a legend is attested for Mahāvīra's predecessor Pārśva; see *Bhagav.* 2, 184. Besides this wider signification there was developed a second more restricted use (see the reference just quoted) viz.—the first member of the six so-called *āvaśyakas*⁵⁷ *i. e.* necessary observances, the treatment of which forms the chief subject of the *Āvaśyakaśāstra* and of the sūtra text, on which the *Āvaśyakajijjatti* is based. In both these works and in the *Nandī*, which in turn also makes special mention of the six *āvaśyakas* with *sāmāyika* at the head, the *ducalasamgaṇa gaṇipīḍagaṇa* with *āchāra* at the head is principally spoken of. Consequently it is easy to conjecture that the use of the word *sāmāyika* occurring here in its pregnant sense as the title of the first *āvaśyaka*, has been the cause of the dropping of this denotation for the first *aṅga* (in order to avoid any misunderstanding⁵⁸), and the reason of the choice of the title *āchāra* for this *aṅga*, [245] a title which is perfectly clear.⁵⁷

Jains themselves affect several etymologies, and generally regard *sama* as the first member of the compound. See also *Bhag.* 2, 186.

⁵⁵ These form the first of the ten groups of the *sāmāyika*, see *Uttarajjh.* 26.

⁵⁶ It is very peculiar that in *Āvaśy. nṛp.* 2, 8 *sāmā* appears as the title of the first *āvaśyaka* and only six verses later on in 2, 14 as title of the first *aṅga*.

⁵⁷ The change may have been favoured by the union of both words in the Brāhmaṇical term *sāmāyāchāra*.

Furthermore transitional stages may be found. In *Arāṅg. nīj.* 2, 14 we read *sāmāna-m-ānaṁ samānaṁ pāra bhāṇasāraṁ*. Here the first *aṅga* is still entitled *sāmāna* although twelve *aṅgas* are treated of: *bhāṇasāra* is the title of the fourteenth *pāra* or of the concluding section "the third part" of the twelfth *aṅga*. In *Chhēdas*, 2, 3 the same is said of the *darūlasamānaṁ sapannattī*: that it is *sāmāna-m-ānaṁ bhāṇasāraṁ*.^{50*}

Now the passages, in which eleven *aṅgas* with *śānti-pāra* at their head are spoken of, are identical with those in which reference is made to twelve *aṅgas* with *śānti-pāra* at their head. It becomes self-evident that the twelfth *aṅga* has been added to the other eleven as a secondary addition. According to tradition and to the actual state of the case, the twelfth *aṅga* did probably not long assert this secondary position which it had acquired: and at present at least is no longer extant. Doubtless it was lost long ago (cf. page 213). From this alone we may conjecture that it was a species of opposition, an actual antagonism between it and the other eleven *aṅgas*, which led to its loss. For the confirmation of this assertion we still have proof. In both the works, which we have just found to be the two principal witnesses for the existence of the twelfth *aṅga*, viz. in the *Arāṅg. nīj.* and in the *Chhēdas*, the twelfth *aṅga* under its head *śānti-pāra* is placed in direct opposition to the other eleven *aṅgas*, which are

there included in the collective title of *kālīyaṁ suvaṇṇaṁ kālīkaṁ śrutam*. This occurs in the *Arāṅg. nīj.*, in the section *parimāṇasamīkṣā*, where the means are explained by which the sacred text is assured through counting its constituent parts. Common subdivisions are ascribed to both its above mentioned parts, but for the chief sections the titles *śānti-pāra*, *arāṅg. nīj.*, *śānti-pāra*, *śānti-pāra* are given to the *kālīyaṁ*, the titles *pāra*, *pāra*, *pāra* to the *śānti-pāra*, rather however to the *dīpikā*. According to this (and the other statements in reference to the division of the *dīpikā* are in agreement herewith) there existed between both these groups of texts a fundamental difference in the designation of their chief divisions. This may probably be referred to a different origin or to a different treatment of the subject matter of both.^{50*} In the *Arāṅg. nīj.* 8, 54 two other texts are mentioned (*śānti-pāra* and *śānti-pāra*) besides *kālīyaṁ* and *dīpikā*. Of these the first is lost, the second has found lodgment among the existing *aṅgas*. Its agreement with the *dīpikā* in its division into *pāra*, leads us to conclude that it must have some connection with it. Finally of special importance is a notice, found but a short distance from this in the same text (8, 40), according to which [247] up to the time of *Ājīva Vajara*, that is, of *Vajrasamāna*, *apahattī* (*apahattī*) *kālīyaṁ* existed, and the *pāra* (*pāra*) "*kālīyaṁ dīpikā*" had found entrance later on: *tēṇāreṇa. tata ārataḥ*.—(To be continued.)

MISCELLANEA.

PANDIT BHAGVANLAL INDRAM

By the premature death of Pandit Bhagvanlal Indram, which occurred on the 14th March last, Indian epigraphists have lost an enthusiastic and able fellow-worker, whose place it will be difficult to fill, and many among them a valued personal friend, whose interesting and sympathetic communications they will greatly miss. Short as was the period during which it was permitted to him

to stand forward as an independent scholar, his indefatigable zeal and rare ingenuity have contributed materially to the progress made of late years in the field of Indian epigraphy and history. His career as a scholar is a most remarkable one, and deserves to be described much more fully than I am able to do with only an imperfect recollection of the particulars of its earlier portion, which he communicated to me during our pro-

⁵⁰ Both the following parts are herewith completely ignored.

^{50*} On the authority of such passages the primary position is ascribed to the *śānti-pāra* in the manuscript, which is the work of the commentary to Bhagvanlal Indram's *Arāṅg. nīj.* also in the *Nandī*, see ed. of the *Nandī*, p. 390—L.

^{50*} In the tradition referred to on page 213 the priority

of the *pāra* over the *aṅgas* is claimed. Their position in the last *aṅga*, at the conclusion of the others, is however not in harmony with this claim. The title *pāra* has rather reference in the last instance to the contents. See below on page 12. It must however be taken into consideration that the old accounts on the rise of the Jainism mention only the *pāras* and not the *aṅgas*, see my paper "Die alten Berichte von den Schismen der Jainas," *Ind. Stud.* Vol. XVII, pp. 107 and 112.—L.

longed intimate intercourse in India. Yet I comply with the request of the Editors of this Journal to write a notice of his life, because I trust that I shall at least be able to do justice to his character, to his scientific attainments, and to the results which he achieved.

Pandit Bhagvānlāl belonged to a highly respectable Brāhman family of Junāgadh which like many others for a long time has received support or employment from the Musalman rulers of Sôrath. An elder brother of his used to be the head of the Sanskrit school, maintained by the *Darbâr*, and is, as I hear, still in the service of H. H. the Nawab. As is usual with the children of those Brāhman who cultivate the hereditary learning of their caste, Pandit Bhagvānlāl was taught Sanskrit from his childhood, in addition to the subjects of the ordinary curriculum of the vernacular schools. He acquired a fair knowledge of its classical literature, but he cared little, as he has repeatedly told me, for the abstruse lore of the *Sâstras*. Like other companions of his who live in the shade of the Girnâr Mountain, he felt more attracted by the historical traditions of his native province which, as a matter of necessity, are kept alive by its numerous ancient buildings and epigraphic monuments. His taste and aptitude for antiquarian researches showed itself very early. When still a boy, he used to pay visits to the venerable rock, on the road to Girnâr, on which the edicts of Asoka and the inscriptions of Rudradâman's and Skandagupta's lieutenants are incised. A little later he studied their ancient characters with the help of a copy of Prinsep's tables of the Indian alphabets, and tried, availing himself of the transcripts of the earlier epigraphists, to decipher their contents. These attempts, which were not altogether unsuccessful, came to the notice of Mr. Kimble Forbes, the generous patron of native talent in Gujârât, and he recommended the young amateur to Dr. Bhāu Dâji, who was on the look-out for a Pandit able to assist him in his epigraphic researches. Pandit Bhagvānlāl eagerly availed himself of the chance which offered, and in 1861 entered Dr. Bhāu Dâji's service, in which he continued during more than twelve years. These years were his *Lehr- und Wanderjahre*, the period of his apprenticeship and travels. The introduction to the paper on the Rudradâman and Skandagupta inscriptions (*Jour. Bo. Br. R. A. S.* Vol. VII. p. 113) as well as that to the article on the Ajanta inscriptions (*ibidem*, p. 53ff), tell us how Dr. Bhāu Dâji worked with his assistants, and how he trained them. It appears Pandit Bhagvānlāl prepared, sometimes alone and sometimes checked by another copyist, eye-copies and rubbings of the documents in-

tended for publication. The texts, thus obtained, were carefully examined and considered by Dr. Bhāu Dâji and an able Pandit, Mr. Gopâl Pāndurang Padhyé, who was a thoroughly good Sanskrit scholar. For doubtful passages the originals were compared afresh. Pandit Bhagvānlāl had again to visit the sites and to seek the solution of the remaining difficulties. Sometimes he had even to wait there for criticisms on his new proposals, and to pronounce on the possibility of readings proposed by his master. As a matter of course, Dr. Bhāu Dâji consulted for his own articles the writings of the earlier epigraphists and the translations of the Greek and Chinese accounts of ancient India. He by no means confined himself to works written in English, but had prepared for himself MS. translations of some of the most important French and German books, such as Burnouf's *Introduction à l'histoire du Bouddhisme*, the appendices to the *Lotus de la bonne loi*, St. Julien's *Life and Travels of Hsuen Tsang*, and Lassen's *Indian Antiquities*. In the conferences with his assistants, he naturally brought forward the views of the most eminent among his predecessors in the same field; and showed how the notes of the ancient travellers might be utilised. Pandit Bhagvānlāl thus not only received a good training in the method of treating inscriptions, but also became acquainted with the history of the science in which he worked, and learned to appreciate the great importance which the notes of foreign visitors possess for the history of India. This training laid the foundations of the position as an epigraphist which he later gained. The aptitude and the zeal which he showed, induced Dr. Bhāu Dâji to confide to his assistant the duty of transcribing all the numerous land-grants which he purchased or received on loan, and to employ him on a kind of epigraphic survey which, beginning in the Bombay Presidency, was gradually extended over the greater part of India. Pandit Bhagvānlāl's journeys, through Gujârât and Kāthiāvād, and those to Ujjain, Vidisâ, Allahâbâd, Banârâ, Sârnâth and Népâl, as well as some of their results are incidentally mentioned in Vols. VII, VIII, IX, and XI of the *Journal* of the Bombay Br. R. A. S. But these short notes give by no means an adequate idea of the enormous extent of his travels, and the very great amount of work which he performed. In Western India, he travelled not only through the northern half of the Bombay Presidency, but also through the greater portion of eastern and western Rājputânâ, including the desert as far as Jaisalmer. In Central India he explored, besides Mâlva and Bhôpâl, also Scindia's territory, a part of the Central Provinces, and the Agrâ, Mathurâ,

Allahâbâd and Benares Districts. In Eastern India, he repeatedly visited Bihâr, both north and south of the Ganges, a part of Bengal Proper and the caves of Orissa. In the North he went as far as Shâhbâzgarhî in the Yûsafzâi District, and as far as Nêpâl at the other extremity of the Himâlâyan range. On these journeys, which were not made continuously, but with intervals of rest at Bombay, he took copies, mostly ink-impressions and paper rubbings, of all the more important known inscriptions, and of numerous unknown ones which he discovered. He also collected hundreds of coins and MSS., and gathered much curious and important information regarding the ancient monuments, and the castes and religious sects of the districts through which he travelled, as well as many historical traditions. With respect to the inscriptions and coins, he by no means confined himself to the mechanical work of collecting and taking copies. He made transcripts and translations into Gujarâtî, arranging them in their proper order and drawing up tables of the various alphabets. In 1875 and 1876 I saw in his library a number of large carefully indexed volumes which contained the results of his work performed at home and on his journeys. During this period he also learned a little English, just sufficient to read the scientific works on India and Indian matters, and studied Prâkrit with a Jaina Gorji, who for some time was in the employ of Dr. Bhâû Dâji.

These extensive and varied researches completed his education as an epigraphist; and made him fit for his career as an independent scholar, which soon after he was forced to begin.

Just about the time of his return from Nêpâl, his connexion with Dr. Bhâû Dâji was brought to an end by the death of that gentleman, which occurred on the 29th May, 1874. The circumstances of the family were not such as to permit their employing Pandit Bhagvânâlâl any longer, or their thinking of a publication of the accumulated materials. But they allowed him to keep the facsimiles and transcripts which he had prepared, and thus gave him a chance of accomplishing what his master had failed to carry out. Though the revival of epigraphic studies had then begun in Western India, and though Dr. Burgess would have gladly welcomed a contributor of Pandit Bhagvânâlâl's attainments, the seclusion in which he had been kept from all contact with European Sanskritists, his precarious worldly position, and his inability to express himself in English, prevented him from coming forward at once. It was fully two years later that his first article was sent by me to the *Indian Antiquary*, and others were laid by Dr. O. Codrington before

the Bombay Br. R. A. S. Pandit Bhagvânâlâl first visited me in the spring of 1875, while I was temporarily staying in Bombay for some official business. He told me, among other matters, that he had made some discoveries on the value and the origin of what then used to be called the cave-numerals. My journey to Kaśmîr prevented my paying at once serious attention to this affair. But when, after my return, he came again, showed me the drawing of his plate, and explained his theory, I felt such an admiration for his ingenious and important discoveries that I offered to put his notes into shape and to get the article published. We prepared it together, and Dr. Burgess printed it in the February number of the *Indian Antiquary* for 1877. In the meantime, the Pandit had been introduced to Dr. O. Codrington, then Honorary Secretary of the Bombay Br. R. A. Soc., who lent him his assistance for the preparation of four short papers on coins, inscriptions and numeral signs (*Jour. Br. R. A. S.* Vol. XII. p 404). Shortly after the appearance of his first publications, Pandit Bhagvânâlâl was elected, in April 1877, an honorary member of the Bombay Asiatic Society on the motion of the late Mr. J. Gibbs; the proposal being seconded by myself and Dr. Codrington. This first recognition of his merits greatly encouraged him, and was of great importance for his career, as it gave him the free use of the Asiatic Society's Library. He amply repaid the obligation under which the Society had laid him, by many excellent contributions to its Journal, and he fully justified the honour shown to him by his incessant literary activity, which continued uninterruptedly almost to the hour of his death. The total number of his published articles is twenty-eight, besides which he has furnished large contributions to some volumes of the *Bombay Gazetteer* and smaller ones to Sir A. Cunningham's *Archæological Reports*.

They contain many discoveries which will be of permanent value, and will cause his name to be remembered as that of one of the most successful students of Indian epigraphy and history.

In paleography, he finally settled the values of the signs of the ancient numerical system. It is an undeniable fact that since the appearance of his plates in the *Indian Antiquary* and in the *Jour. Br. R. A. S.*, the vacillations in the readings of the dates, expressed by "cave-numerals," have disappeared, and that now differences on such points are rare among competent epigraphists. His theory that the "cave numerals" are letter-numerals has been disputed, but makes way more and more. This much seems now indisputable, that, whatever the origin of these signs may be,

they have always been considered by the Hindus of historical India as syllables, and that the changes which they show in various documents, in the main depend on the character of the alphabet used. In the interest of truth I cannot suppress the remark that Pandit Bhagvānlāl's name ought to have been mentioned by Dr. Bhāu Dājī in his article on the cave-numerals. I have strong reasons for the belief that at least a considerable share of the results, at which Dr. Bhāu Dājī arrived, is due to Pandit Bhagvānlāl's industry and ingenuity. Another service which he has rendered to palaeography, is the discovery of the real value of some signs of the most ancient Southern and Northern alphabets. He first recognised the *U* on inscriptions of Rudradāman and of Pulamūyi. His transcript of the first rock-edict in the Śāhābāgarhi version, *Ind. Ant.* Vol. X, p. 107, for the first time rendered the signs for *thi* and *men* correctly. The discovery of the *tha* was made simultaneously by Dr. Hoernle. To his skill, finally, we owe some of the finest fac-similes of inscriptions, among which the Nasik series in Volume IV of the *Archæological Reports of Western India* deserves a special mention. Pandit Bhagvānlāl's service to historical research are very numerous and varied. The fragment of Asoka's eighth rock-edict, which he found at Sujārā, shows that the great Maurya held the western coast of India as well as the eastern one, and explains the occurrence of a later Maurya dynasty in the Konkan. Equally important is his discovery of an era of the Maurya kings in the Udayagiri inscription of Khāravela. In my opinion, it is now probable that, though Asoka dates according to regnal years, the Mauryas had and used an era of their own; and I hope that, when the now absolutely necessary excavations at Patna have been made, records will be discovered which will furnish a real and full account of the beginning of the historical period of India. The same paper on the Hathigumpha inscriptions, which makes us acquainted with the Maurya era (*Notes du Service de l'Épigraphie Ind. et d'Or.* Vol. III, pt. 2, p. 132) gives also the first account of the ancient Cheta dynasty which ruled Kalinga in the second century B.C. It also shows that king Khāravela was the contemporary of one of the early Śātavāhanas of the Andhra dynasty, and thus establishes a valuable synchronism, the full importance of which will, however, only appear when the beginning of the Marīyārājakāla has been definitively settled. Pandit Bhagvānlāl's researches have also in other respects materially advanced our knowledge of the history of the Andhras. He first recognised the value of the Nānāghāt inscriptions, and did much for their

interpretation (*Jour. Bo. Br. R. A. Soc.* Vol. XIII, p. 303) and for that of the Paṇḍu Lenā inser. (*Bombay Gazetteer*). He discovered two new kings of this dynasty, Mādhariputa-Sakasēna or Sirisēna and Vāsirhāputa-Chaturapana (?) (*Jour. Bo. Br. R. A. S.* Vol. XII, p. 407 and Vol. XV, p. 336). By his article on the Andhrabhritiya coins (*ibidem*, Vol. XIII, p. 333) he contributed much towards settling the sequence of some of the later kings. As regards the later Indian dynasties, he has been the path-finder in the history of Nepāl, for the explanation of which his twenty-one inscriptions (*Indian Antiquary*, Vol. IX, p. 163, and XIII, p. 411) have laid the foundations. The pedigree of the Rashtrakūṭas of the Dekhan has been lengthened by his discovery of the Elūra inscriptions (*Arch. Surv. B. I.* No. 10, p. 92). The recognition of the existence of a once powerful Trakūṭaka dynasty in Western India is solely due to his revised edition of Dr. Bird's Kanheri plate (*loc. cit.* p. 57), and to his paper on the grant of king Dāhrasena (*Jour. Bo. Br. R. A. S.* Vol. XVI, p. 316). The elucidation of the history of the Śihhāra chiefs of the Dekhan and of the Konkan, owes much to his two papers in the *Jour. Bo. Br. R. A. S.* Vol. XII, p. 329, and Vol. XIII, p. 1, and to his contributions to Vol. XIII, Pt. II., of the *Bombay Gazetteer*. The history of the Gurjara and Chālukya princes of Gujārāt has gained an altogether new aspect, in consequence of his article in the *Indiana Antiquary*, Vol. XIII, p. 80, and in the *Vierteljahrsschrift des Südwesten Int. Or. Cong.*, *Asiatische Section*, p. 211. I hold it to be now evident the Gurjara *Śimvātās* of Broach were not an ephemeral dynasty, counting only three kings, but that they ruled over Central Gujārāt during four or five centuries. The great difficulties which the Khedā plates of the Chālukya Vijayarāja used to cause, have disappeared since it has been shown that they belong to a late period when the Dekhan Chālukyas had grown powerful and extended their sway to the western coast. Moreover, it has now become certain that feudatory Chālukya kings ruled in Southern Gujārāt for several centuries, down to the conquest of the province by the Rāṭhōrs. These results are chiefly due to Pandit Bhagvānlāl's discovery that an era, which began in the middle of the third century A.D., was extensively used in Gujārāt during the seventh and eighth centuries. He was enabled to furnish convincing proof of this fact, because, fortunately, he had kept a copy of the hitherto present inaccessible grant of Mangalarāja, the second prince of the Chālukya dynasty of Southern Gujārāt, who used the Saka era, while his elder and younger brothers preferred the later one. Sir A. Cunningham and Mr

Fleet then showed that the era in question was the Chedi-Samvat used by the Haihayas of Central India, in which identification Pandit Bhagvānlāl acquiesced. His latest attempt to account for the occurrence of the Chēdi era in Gujarāt, by the assumption that it was established by the Ābhira king Iśvaradatta, and by the identification of the Ābhīras of Gujarāt and Nāsik with the Traikūṭakas, and the Haihayas of Chēdi, is for the present nothing more than an ingenious speculation. But his combinations are, though very bold, yet by no means improbable; and it is very likely that his extensive unpublished paper on the Kshatrapas of Western India, which will be published in the *Journal of Br. R. A. S.*, will show them to be well founded. Another work on which he was engaged until his death, is a history of Gujarāt from the earliest times until 1300 A.D. In addition to his services to the political history of India, those rendered by him to the history of the religious sects, especially of the Jainas, deserve to be mentioned. Pandit Bhagvānlāl was always a staunch adherent of the theory that the Jainas are an independent community, the latest development of which dates from the times of Buddha. He fully agreed with me on this point when I told him, in 1876, that I had found notices of the *Tirthankara* Mahāvira in the Buddhist Scriptures. Later he has shown that the Jainas were then, or one of the, ruling sects in Kāśmīra during the times of the Chēta dynasty, just as at the period of Hiuen Tsiang's visit; and that the Udayagiri and Hathigumpha inscriptions belong to patrons of the Jainas. He also brought to notice the important Jaina inscription from Mathurā, which clearly proves the existence of Jaina temples in that city during the first century B.C., and he first recognised that the Kāśmīra pillar, erected according to its inscription in Gupta-Samvat 111 or 460-61 A.D., is a Jaina monument. On the Śaiva and Vaiṣṇava sects, he has only made occasional remarks. These show distinctly, what he also has often told me in private conversation, that he did not agree with those who consider the religious movements in India to consist of the successive development of what is sometimes called Vāchism, Brāhmanism, Buddhism, and Hinduism. He held the view, at which every careful student of the real historical documents must arrive, that the Hindus have not proceeded in so systematic a manner, but that many of the modern creeds existed almost in the same form at the beginning of the historical period of India, and that many currents of religious thought and life have run on side by side since very early times. His papers contain also many valuable notes on the geography of ancient India, and numerous perfectly certain identifications of

towns and villages mentioned in the inscriptions. His essays on the antiquities of Supārā and Padārā, and on the Paṇḍu Lenā and the Hathigumpha inscriptions, show that he had directed his attention to archaeology, and prove an intimate acquaintance with the various styles of architecture and ornament. The famous discovery of the Supārā *Stūpa*, which he made together with Dr. J. MacNabb Campbell, will perpetuate his name as that of an able and lucky archaeological explorer.

The great services which Pandit Bhagvānlāl rendered to Oriental learning found also further ready recognition. In 1883 the University of Leiden granted to him, on the recommendation of Professor Kern, the honorary degree of Doctor of Philosophy. Shortly afterwards he was made an Honorary Member of the Koninklijk Instituut voor de Taal-, Land- en Volkenkunde van Nederlandsch Indië, and of the Royal Asiatic Society of Great Britain and Ireland. In 1886 the Chiefs of Kāthiāvād originally selected him as the delegate to the Seventh Int. Or. Congress. He was, unfortunately, compelled to decline the offer on account of a very serious illness. Many of the most eminent Orientalists in India and Europe entered into correspondence with him, and honoured him with their friendship. Since, of late years, the annual migrations of European Sanskritists to India became the fashion, his house at Walkēshwar was one of the points of attraction for them in Bombay. All those who visited him, left him full of respect for his learning, and enchanted with the readiness with which he showed his treasures, and gave them advice and assistance in their researches. He, on his part, valued these visits more than any other honour shown to him. Only a few months ago, on January 6th, he wrote to me a warm letter of thanks, expressing his gratitude for my having procured him the pleasure of acquaintance with our illustrious colleague, M. E. Senart. Of my own personal intercourse with him, I have kept the most agreeable remembrances. After his natural shyness and his distrust of Europeans, which, I think, had been implanted artificially, were overcome, he became a most amiable companion, perfectly unreserved and truthful even in matters on which the majority of Hindus find it difficult to speak with full candour. In the autumn of 1876, and again in July and August, 1879, we worked daily from 6 to 9 in the morning—the only time I could spare—at the translation of his papers on the Numerals and the Nepalese Inscriptions. Our work was both times unduly protracted, because very frequently *antarakathās*, as we used to call our incidental conversations, drew us off from our

man purpose. We used to discuss not only the chief problems and results of antiquarian and literary research, but also the social, political, and religious condition of modern India. In these conversations, I was often struck with the fairness and impartiality of his remarks on men and matters. He never showed any jealousy of the merits of others, but freely acknowledged what was worthy of praise in their work and character: nor did he allow his judgment to be clouded by national vanity. A point which did him great honour was his feeling towards his former master, Dr. Bhāu Dāji. Though fully conscious of the weaknesses of the latter, he felt for him as only an Indian pupil can feel for his Guru. He was still devoted to him, *ton* and *man*, with the same devotion which he had shown so often during Dr. Bhāu Dāji's lifetime. On literary, historical, and linguistic questions, we often differed very considerably. His bearing in such discussions was always perfectly self-possessed and gentlemanly. It was not easy to induce him to give up an idea which once had taken root in his mind. But in spite of a great sensitiveness he always openly acknowledged a defeat. Though he had, as was only right and just, a very good opinion of himself, and of the ability of his countrymen, he more than once made the apparently sincerely meant remark, that the Hindus did not possess the same mental strength as the Western nations, and he never found the least difficulty in admitting the fact that their ancestors had borrowed much from the Greeks and other foreigners, with whom they came into contact. Of the social, political, and religious life of modern India, especially in the Native States, he gave me more trustworthy accounts than almost any other of my numerous Hindu acquaintances, whose statements were only too often biased one way or the other. His amiable frank character, his keen intelligence, and his extensive learning, made him very dear to me. I shall never forget the pleasant days, when I used eagerly to look forward to the announcement that the *Panditji* had come; and I gladly acknowledge now, as I have done already on special occasions, that I have learnt a great deal from him.

His worldly circumstances were unfortunately never very satisfactory. When I made his acquaintance, he was engaged in business with, or was working in the office of, a native merchant in Bombay. I believe he kept this connection up also later, though he was temporarily employed by Dr. Burgess and by Dr. J. M. Campbell, the compiler of the famous *Bombay Gazetteer*. During my stay in India, I repeatedly tried to secure for him a permanent place in the Govern-

ment service. But I failed, partly because he did not possess a sufficient knowledge of the English language, and partly because his terms were rather high, and he claimed a certain independence in his position. He was, however, by no means quite neglected. Besides the no doubt liberal pay for the work which he did for Drs. Burgess and Campbell, he received generous assistance from the Kāthiāvāḍ Chiefs and other patrons, as well as, on the completion of his inscriptions from Népāl, the whole savings, nearly one-half, of the original Government grant of Rs 2,000. With such occasional help, he seems to have been able to live not uncomfortably, except in the last months of his life, when he became very infirm. In his last letter, dated the 27th January, 1888, he, for the first time, complained of his circumstances. He told me that, after suffering more or less during four years, he had become for the last two months so weak in body as to be unable to leave his bed, and that, though, only 49 years of age, he was quite an old man and unable to work for his livelihood. He asked me, therefore, to apply to the Divān of Junāgaḍh for a pension. I fulfilled his request at once, and the courteous reply of Mr. Haridās Behāridās leaves no doubt that Pandit Bhagvānlāl would have received help, if he had not died so soon. In spite of his bodily weakness and his cares, he continued his literary work to the last. In the letter of the 27th January last, he added, after describing his infirmity,—"But my mental power is, on the contrary, good. I have engaged a graduate of the University." Having taught him with great trouble, I make him write "my" articles (*prāpta bhāvaṃ chhānā*).¹ Some time before his death he made a will, bequeathing his coins and copper-plates to the British Museum, his papers and MSS. to the Asiatic Society of Bombay. Mr. Vajeshankar G. Ozha of Bhāumagar has informed me that Pandit Bhagvānlāl's admirers in Kāthiāvāḍ intend to raise a fund in order to perpetuate his name by the endowment of a scholarship in connection with the Bombay University. I trust that all European Orientalists will join with his compatriots in order to do honour to the memory of their distinguished colleague who spent his whole life in the pursuit of disinterested scientific work.

G. BÜHLER.

Varanasi, May 18th, 1888.

CALCULATION OF HINDU DATES.

No. 18.

¹ In the Kuttar stone inscription of the Kolamba king Jayakēśin III., from the Bel-

gaum District, published by me¹ in the *Jour. Bo. Br. R. A. Soc.* Vol. IX. pp. 263, 304ff., the first date (lines 3, 12f) runs—Kaliyuga-samvat-saram 4289 sand=ad=ādī di y-āgi Śrī-Vira-Jayakēśi-sidēv-arasara varshaka(=da) 15-neya Du(r)ṇimati-samvatsarada Āshādha(=ha)-śud(dh)ra-ashtami-8-Ādivārad=amdu.—“the Kaliyuga year 4289 (is the moment,² commencing from that point),³ on the first day (i.e. on Sunday), the eighth *tithi*, (or in figures 8, of the bright fortnight of the month Āshādha of the Durmati *saṃvatsara*, which is the 15th of the years of the illustrious king Vira-Jayakēśideva.” And the inscription goes on to record a trial by ordeal, in a dispute about some land, between Śivaśakti, the *Āchārya* of the god Kallēsvara of the well called Atribāvi at Kittūr, and Kalyānaśakti, the *Āchārya* of the *Mālashtōna* god of the same locality.

The above is the date on which the dispute was formally opened for trial. In line 25f it is recorded that—tat-samvat-sarada Āshādha(=ha)-bahula-7-saṃtami-Ādivārad=adam,⁴ i.e. “on the first day (Sunday), 7, (or inwards) the seventh *tithi*, of the dark fortnight of Āshādha of that same *saṃvatsara*,”—the ordeal was undergone, Kalyānaśakti taking an oath, apparently with some sacred symbol or image on his head,⁵ and Śivaśakti taking an oath, with a heated plough-share in his hand.⁶ And finally, in line 39f, it is recorded that—ā-bahula-8-Somavāra d=divasa, i.e. “on Monday, the 8th (*tithi*) of that same dark fortnight,”—the adjudicators, viz. all the *Mahajanas* of the neighbouring village of Dēdāve, convened in an assembly in the *sabhoimāṭṭapa* examined Śivaśakti’s hand,⁷ and, evidently finding it unimjured, decided that he had won his case, and that the land in dispute really belonged to the god Kallēsvara.

This gives us, apparently as the basis of the calculation, Kaliyuga-Samvat 4289, which, if it should be taken as expired, is equivalent by the Tables to Śaka-Samvat 1119 expired, and the details of the Durmati *saṃvatsara*, current,

of the Sixty-Year Cycle of Jupiter; the month Āshādha (ordinarily June-July);—and (1) the eighth *tithi* of the bright fortnight, coupled with Ādivāra, or Sunday; (2) the seventh *tithi* of the dark fortnight, coupled with Ādivāra, or Sunday; and (3) the eighth *tithi* of the dark fortnight, coupled with Somavāra, or Monday.

But, if the apparent application of the given Kaliyuga year is accepted, we should have to assume some very considerable error in the record; for the given year, whether it is taken as current, or as expired, does not agree with the name of the *saṃvatsara* according to either the Southern or the Northern System of the Cycle.

Thus, by the Northern System of the Cycle, I find from Mr. Sh. B. Dikshit’s Tables that the Durmati *saṃvatsara* commenced in Kaliyuga-Samvat 4298 and Śaka-Samvat 1119, both current A.D. 1196-97, on Friday, the 8th November, A.D. 1196; and it was followed by the Dundubhi *saṃvatsara* in Kaliyuga-Samvat 4299 and Śaka-Samvat 1120, on Tuesday, the 4th November, A.D. 1197. And here, with the basis of Śaka-Samvat 1119 expired, from Prof. K. L. Chhatre’s Tables I find that the results are,—(1) Āshādha Śukla 8 ended on Tuesday, the 21st June, A.D. 1197, at about 42 *ghatis*, 3 *palas*, after mean sunrise (for Bombay);—by the *Pīṇamūḍa* northern arrangement of the lunar fortnights, (2) Āshādha Krishna 7 ended on Sunday, the 8th June, at about 55 *gh* 22 *p*; and (3) Āshādha Krishna 8 ended on Monday, the 9th June, at about 59 *gh* 35 *p*;—and, by the *Amṛata* southern arrangement, (2) Āshādha Krishna 7 ended on Tuesday, the 8th July, at about 52 *gh* 56 *p*; and (3) Āshādha Krishna 8 ended on Wednesday, the 9th July, at about 37 *gh* 8 *p*. Thus, if we could admit the exceptional use in Southern India, at this period, of the Northern System of the Cycle and the *Pīṇamūḍa* northern arrangement of the fortnights, the correct week-day is obtained in two cases out of the three, and it might be thought that either the writer or the engraver of the

markti, saying (this intimate land named) *Mālashtōna*, *kevi* is the property of the *Mālashtōna* god, became standing on the head.” The word *śaṃsthā* q, or, in its full Sanskrit form, *śaṃsthāyana* can hardly be intended to be taken in its literal sense. But I have not been able to obtain any certain explanation of the meaning that is to be given to it here.

⁶ In line 20f we have ā *Siva* *akti* *pīṇamūḍa* *phala* *diṅga*, *hāḍha* *śaṃsthā*, that same *Siva* *akti* having said “I will hold the *pīṇamūḍa*,” and in line 27, ā *Siva* *akti* *phala* *pīṇamūḍa* *śaṃsthā* *hāḍha* *śaṃsthā* *phala* *diṅga*, that same *Siva* *akti*, holding the *pīṇamūḍa* mark, an oath to the following effect: “*Pīṇamūḍa* is a corruption of the Sanskrit *phala* ‘a plough-share,’ and *phala* *diṅga* is one of the ten ordeals given by Momer-Williams in his Sanskrit Dictionary, s. v. *diṅga*, ‘an ordeal’.

⁷ ā *Siva* *akti* *phala* *kayga* *phala*, s. v. *diṅga*, line 31

¹ For a bibliography, see, when issued *Indian Antiquary*, No. 33.

² Here *samudra* seems to be the noun, meaning ‘a fissure, crack, opening, a lane, narrow street, an interval of time,’ not the past participle of *sambhū*, ‘to be current, to pass (as time).’ Compare the fuller word *sambhūṭa*, ‘an opportunity, a crisis, an ominous interval of time.’

³ The intervening passage, in lines 3 to 12, contains only the long string of titles and epithets of Jayakēśi. III. ⁴ Read *ad=adam*.

⁵ In line 21 we have ā *Kalyā* *akti* *śaṃsthā* *phala* *diṅga*, that same *Kalyā* *akti*, having become standing on the head, (made) an oath to the following effect. And in line 29f we have ā *Kalyā* *akti* *śaṃsthā* *phala* *diṅga*, that same *Kalyā* *akti*, having become standing on the head, (made) an oath to the following effect.

inscription simply made a mistake, and transposed the figures 9 and 8, and thus gave Kaliyuga-Samvat 4289, instead of 4298 (as an expired year). But the week-day in the third case, differing by two days, renders it impossible to accept these results and this explanation. And I shall shew that the figures 4289 are really correct: though they have not the application which suggests itself at first sight.

By the Southern System of the Cycle, the Durmati samvatsara coincided with Kaliyuga-Samvat 4303 and Śaka-Samvat 1124, both current (A.D. 1201-1202). Here, with the basis of Śaka Samvat 1123 expired, the results, in all three cases, work out quite correctly; thus—(1) Āshādha sukla 8 ended, as required, on Sunday, the 10th June, A.D. 1201, at about 52 *gh* 39 *p.*;—and, by the *Amānta* southern arrangement of the fortnights, (2) Āshādha kṛishṇa 7 ended on Sunday, the 24th June, at about 26 *gh* 37 *p.*; and (3) Āshādha kṛishṇa 8 ended on Monday the 25th June, at about 20 *gh*. 19 *p.*

These results are exactly in accordance with those obtained under Nos. 15, 16, and 17 above. And they shew that, as was in fact to be assumed from the locality and period of the record, the real guide in calculating the details is the name of the samvatsara according to the Southern System of the Cycle.

It only remains to explain the apparent discrepancy between the given Kaliyuga year and the samvatsara. As we have seen, the results are correct for Kaliyuga-Samvat 4303 current. By the record, the period from Āshādha sukla 8 to kṛishṇa 8 of this year, was in the fifteenth year of the reign of Jayakēsin III. Accordingly, the period from Āshādha sukla 8 to kṛishṇa 8 of the first year of his reign, was in Kaliyuga-Samvat 4289 current. And, differing from the way in which it has to be applied in Nos. 15, 16, and 17, the given Kaliyuga year is evidently here used as giving, not the basis of the computation of the details of the dates, but simply the period from some point in which there commenced the first year of the reign, of which there is quoted the fifteenth year, with those details referred to it. This is rather an exceptional use of the leading item in a date. But, two exactly analogous instances are furnished by Nos. 19 and 20 below.

We may also note that the similar use of Kaliyuga-Samvat 4288 expired in No. 19, shows that in the present case we distinctly have the quotation of a current Kaliyuga year.

No. 19.

The preceding result enables us to deal conveniently with the Halsi copper-plate grant of

the same Kādamba king Jayakēsin III., from the Belgaum District, published by me in the *Jour. Bo. Br. R. As. Soc.* Vol. IX. pp. 231 f. 241 ff., in which the date (line 66 ff.) is—*sāṣṭy-āṣṭī-śatadvay-ādhikēśhu chaturshu saha-rēśhu Kaliyuga-samvatsarēśhu parāvṛttēśhu śrī-Saptakōṭīśvara-labdhā-vara-prasāda-śrī-Kādamā-Vīra-Jayakēśideva-vijaya-rājyē pravartamānē trayōdaśē Siddhārthi-samvatsarē Chaitra-suddha-dvādaśī-Guruvārē damanārōpana-samanantaram.*—“when there have expired four thousand years of the Kaliyuga, increased by two hundred together with eighty-eight; while there is current the Siddhārthi samvatsara, which is the thirteenth (year) in the victorious reign of the glorious Kādamba Vīra-Jayakēśideva, who has acquired the excellent favour of (the god) the holy Saptakōṭīśvara: on Thursday, the twelfth *tithi* of the bright fortnight of (the month) Chaitra; immediately after the *damanārōpana* (ceremony). And the inscription goes on to record a grant of the village of Kīruvalasigā by Jayakēsin III., in this the thirteenth year of his reign.

This gives us, apparently as the basis of the calculation, Kaliyuga-Samvat 4288 expired, which by the Tables is equivalent to Śaka-Samvat 1109 expired; and the details of the Siddhārthi samvatsara, current, of the Sixty-Year Cycle; the month Chaitra (ordinarily March-April), the bright fortnight; the twelfth *tithi*; and Guruvāra, or Thursday.

But, if the apparent application of the given Kaliyuga year is accepted, here again we should have to assume a very considerable error in the record.

Thus, by the Northern System of the Cycle, the Siddhārthi samvatsara was current at the commencement of Kaliyuga-Samvat 4297 and Śaka-Samvat 1118, both current (A.D. 1195-96).

While, by the Southern System of the Cycle, the Siddhārthi samvatsara coincided with Kaliyuga-Samvat 4301 and Śaka-Samvat 1122, both current (A.D. 1199-1200). As we have seen in the four preceding instances, this is the period for which we must expect to obtain a correct result. And, as the *Mishra-Samkranti* of Śaka-Samvat 1122 current occurred on Thursday, the 27th March, A.D. 1199, on which day there ended the twelfth *tithi* of the dark fortnight of Chaitra, the calculation has to be made with the basis of Śaka-Samvat 1120 expired. With this basis, it may be seen that the given *tithi*, Chaitra sukla 12, ended, as required, on Thursday, the 11th March, A.D. 1199, at about 23 *gh*. 26 *p.*

Here again, as in No. 18 above, we find that the given Kaliyuga year is used as giving, not the basis of the computation of the details

A.D. 1250, at about 18 *gh.* 10 *p.*; and the Tulā-Samkrānti occurred on the same day, at about 22 *gh.* 1 *p.*

Here again, as in Nos. 13 and 19 above, we find that the given Kaliyuga year is evidently intended to give, not the basis of the computation of the details of the date, but simply the period from some point in which there commenced the first year of the reign, of which there is quoted the fifth year, with those details referred to it. But in this instance there seems to be a mistake, either in the regnal year, or more probably in the Kaliyuga year. For, by the record, (the natural) Āsvayuja śukla 1 of Kaliyuga-Samvat 4352 current, was in the fifth year of the reign of Shashthadēva II. Consequently, Āsvayuja śukla 1 of the first year of his reign, was in Kaliyuga-Samvat 4348 current. And the given expired Kaliyuga year ought, apparently, to be 4347 instead of 4348.

J. F. FLEET.

ARABIC ORIGIN OF "BOSH."

SIR,—This highly expressive English slang word, though in everyday use by all classes, is omitted in all the dictionaries which I have had an opportunity of consulting, except one. Nuttall, defines it:—"Outline; figure; in *pop. lang.*, nonsense, folly," but he gives no clue to its derivation. In thinking over the origin of the word lately, it occurred to me that many years ago, in reading an English story, the scene of which was laid in Asiatic Turkey, I had seen the word *bosh* frequently used by a Turk, in Turkish sentences, and, apparently, in the same sense as in English. I then referred to a Turkish dictionary, in which the word *بوش* *bish* is defined as empty, useless. These meanings, though somewhat unsatisfactory, are not inconsistent with the idea that the word under discussion is borrowed directly from the Turkish language. I shall now endeavour to trace this Turkish word back to the Arabic.

Everyone whether acquainted with Arabic or not who has touched at any of the Egyptian ports or Aden must remember hearing the expression *ما فيش* *mā-fish*, which is a contraction of *ما في شيء* *mā fi shay*, and means literally:—"There is not any thing." Both in Yaman and Egypt the expression is frequently used as a simple negation, "not,"—but when used in this sense in the Maghribi, or Egyptian, dialect it is usually corrupted into *موش* *mush*, while in

Yaman it remains unaltered. Thus, an Egyptian would say—*هذا موش طيب* *hādha mūsh tayib*, "This is not good;" while a Yamanī Arab would say,—*هذا ما فيش طيب* *hādha mā-fish tayib* or, simply, *hādha mū tayib*.

While residing in Aden and in the Somali Country I frequently noticed an interchange in the letters *m* and *b*, especially in proper names. I regret that I did not note examples at the time; but I remember one instance, which occurs in the name "Idris 'Umēsh," one of the leading citizens of Zaila (زيلع). He always signed his name in

Arabic characters:—*إدريس عيش* though he was commonly called in the town: "Idris 'Umēsh." On questioning him and others about this difference, I was informed that both modes of spelling were correct, because *m* and *b* were often considered one and the same letter.

A similar interchange of these letters occurs in the name of the river *Narmadā*, which I believe, is always so written in the vernacular languages of India, though better known to Europeans as the *Nerbudda*.

This completes the chain in the somewhat complicated derivation of the popular English word *bosh* from the Arabic *mā-fish*. I offer the suggestion with some diffidence, and shall be glad to hear the opinions of others on the subject. The derivation here suggested has at least the merit of originality.

J. S. KING

As to the origin of the word *bosh*, the *New English Dictionary*, *s. v.* says "slang or colloquial.—A Turkish word *بوش* *bish*, empty, worthless; the word became current in English from its frequent occurrence in Morier's novel *Agasha* (1834) which was extremely popular, especially in the Standard Novels Edition, 1846."

Thence the great Dictionary traces its use in the senses of "contemptible nonsense, stuff, trash, foolish talk or opinions" up to the present day. And in the senses of "Stuff and nonsense" *humbug!* it says that it was first heard of in Dickens, *Black House*, 1852.

Yule, *Anglo-Indian Glossary*, *s. v.* says "this is alleged to be taken from the Turkish *bish*, signifying 'empty, vain, useless, void of sense, meaning, or utility' (Redhouse's *Dict.* But we have not been able to trace its history or first appearance in English."

R. C. TEMPLE.

BOOK NOTICE.

PROF. WEBER ON AHALYA AND Ἀχάλλευς.¹

On the 10th November 1887, Prof. Weber read before the Royal Prussian Academy of Science a short but suggestive paper on the above subject.

The popular story of Ahalyā is well known. She was Gautama's wife, and was seduced by Indra, who presented himself to her in the form of her husband. Her indignant spouse condemned her under a curse to become a stone till she was touched by Rāma's feet. The latter touched the stone with his feet on his way to Viśvāmitra's hermitage. She came to life, and went to heaven after seeing Rāma. The early portion of the story, it may be added, is alluded to in Vedic literature. Professor Weber sets himself to solve the question as to what is the underlying meaning of this legend of the beloved of Indra, whom he won so basely? A clue, he thinks, may be found in a legend of the Jainas, in which she appears in an altogether different connection. She is there classed with Sitā, Draupadī and other women, who were the cause of mighty wars. Her name appears there as Ahitīyā, Ahilliyā, Ahiliyā, Ahilā, and Ahinnikā.² This leads to the conjecture that Ahalyā may be connected with Ahanyā, and may mean 'clearness,' 'light,' 'Aurora.' Indra, the god of the bright heaven would be therefore simply the 'lover of the light' (*Ahalyāyai jara*, of the Subrahmanya ritual). So also he is called in another variant of the same ritual *svasur jara*, 'lover of his sister,' i.e. *ushasō jara*, 'lover of the Aurora.'

Her husband was Gautama or Gôtama = [Gomattama (?)] 'very rich in cows,' which may be a reference to the Sun's cows, whose rape is so often referred to in the old myths. Gôtama may therefore be the 'thousand-rayed cow' of the Vêda, i.e. either the sun or the moon, and Ahanā or Ahalyā would fitly appear as his spouse.

If now, instead of using the picturesque expression 'lover of the light,' it were desired to express Indra with the help of a suffix meaning 'longing for,' we should get from *ahan* or *ahar* the forms **ahanya*, **aharya*, **ahalya*, and the last would agree in form with Ἀχάλλευς, which would therefore appear to signify 'longing for the light,' 'for the day,' or 'for the Aurora.'

There are several points of resemblance between Indra and Achilles. In the Mahābhārata, Arjuna or Phalguna was an incarnation (or son) of Indra, and is continually and closely associated

with his friend and protector Krishna. In the Jaina version of the Krishna legend, we find that he was vulnerable in the foot, and that it was there that he was struck by the fatal arrow.

Further, neither Krishna nor Achilles (both of whom were the greatest heroes in their respective armies) took any share in the fighting of the side on which he appeared. The grounds of abstinence were different, it is true. Achilles stays away in anger, and finally joins in the combat, while Krishna is bound by an agreement to abstain, though he helps the Pāṇḍavas by his advice. Is this symbolic of the slow gradual development of the storm-conflict, whose aim is the recovery of the ravished daylight?

These considerations lead to the discussion as to how much the Mahābhārata owes to Greek influence, and to the Homeric poems. We find in it that the Yavana king Bhagadatta was an old friend of Yudhishtira's father; that the Yavana king Kasérumant, in whose name we seem to see traces of the word *καίσαρ*, was killed in battle by Krishna; that the mighty Kāla-Yavana met the same fate; that the Yavanas joined in the battle between the Kurus and the Pāṇḍavas, beside the Sakas and the Pahlavas (the last word only dating from the 2nd century A.D.); and we cannot doubt that the present text of the Mahābhārata belongs to a period in which the names of Greeks, Indo-Scythians, and Parthians were well known, and had wide influence.

As evidence regarding the gradual growth of the Mahābhārata it is of interest to know that Al-Bêrûnî, in his description of the contents of that epic, omits all mention of the first book, the *adīparvan*, commencing with the *sabhāparvan* as the first.

Prof. Weber winds up this portion of his argument by explaining that the question is a very wide one, and is in no way confined to the Homeric poems, but extends over the whole range of fables, tales, and myths. It is often impossible to say whether India has borrowed or has lent the original legends, and this can only be decided in each particular case on its own merits. As regards the Achilles-Krishna myth, he is unable to give a definite reply one way or another.

The author concludes his interesting essay with the text of the Jaina legend in which Ahalyā is mentioned in connection with other heroines as already pointed out. G. A. GRIERSON

¹ *Ahalyā*, Ἀχάλλευς, in *Verhandl.*, Von Albr. Weber.

² In medieval and modern Hindi she is called Ahilā or Ahilyā.—G. A. G.

³ I may mention one thing in connection with Indra's seduction of Ahalyā. She is according to tradition one

of the typical sinners saved by Rāma, and her typical sin was *lāsa*, 'laziness.' Her laziness consisted in her not observing that, when Indra came disguised as Gautama, he cast no shadow. This is of course a common property of all Hindū gods, but the fact is significant in its present connection.—G. A. G.

THE INSCRIPTIONS OF PIYADASI.

BY É. SENART, MEMBRE DE L'INSTITUT DE FRANCE.

Translated by G. A. Grierson, B.C.S., and revised by the Author.¹

CHAPTER II.

THE COLUMNAR EDICTS.

UP to the present date we possess five columns (or *lâṭs*) on which are engraved edicts emanating from Piyadasi:—

1.—The one which has been longest known, and which is the most important, is the **Dehli column**, commonly known as the **Lâṭ of Firūz Shāh** (D), because it was that prince who had it removed to Dehli from its original resting-place. This is the one which bears the most complete set of edicts. It is, I think, most convenient to follow the enumeration of the edicts suggested by General Cunningham, and I shall therefore say that this pillar carries seven edicts inscribed in four groups, on each of its sides. An eighth, engraved below, surrounds the shaft in several lines.²

2.—Another pillar exists at **Dehli**, where it was also transported by Firūz (D²). It is the one called by General Cunningham the **Mêrath (Mirat) pillar**, from its original site. It only preserves a short fragment of the 1st edict, the whole of the 2nd and 3rd, and portions of the 4th and 5th. The 6th to 8th edicts are altogether missing from it.

3.—The **Allahābād column** (A), comprising edicts I. to VI. Only the two first are complete. One line remains of the 3rd; and of the others, fragments of greater or less extent. It is characterised by the presence of two fragments which we do not find elsewhere, and which are unfortunately in bad condition: one, previously known to Prinsep, has been named by General Cunningham, 'the Queen's edict'; the other, which was reproduced for

the first time in the *Corp. Inscr. Indic.* Vol. I. Plate xxii., is addressed to the officers of Kauśāmbi. They form a necessary appendix in our revision of this class of edicts.

The two last columns were discovered in sites at short distances from each other; and each contains the first six edicts:—

4.—One is that at **Radhiah** (R), which General Cunningham prefers to call Lauriya Ararāj.

5.—The other is the **column of Mathiah** (M), which has received in the *Corp. Inscr. Indic.* the name of Lauriya Navandgarh.

I do not propose to dilate upon the description and history of these monuments. I could only repeat facts already dealt with by Prinsep and General Cunningham, to which I have referred in a general way in the Introduction. It will be sufficient to recall to mind that **the different texts are essentially identical in all common portions**. I have therefore taken, as a basis, the longest and only complete text, that of **the pillar of Firūz Shāh**. This is the text which I transliterate, giving in foot-notes the variations of the other versions when they differ.³

The orthographical or palæographical peculiarities which this set of inscriptions presents to view are not such as to offer any peculiar difficulties in translation. I therefore neglect them here, and shall revert to them when I examine the philological and grammatical questions as a whole. I may add that I have considered myself authorised, by the experience acquired in the minute analysis of the Fourteen Edicts, to pass over in silence irregularities of detail which can lead to no misunderstanding.

¹ In former volumes (IX. p. 282 ff. and X. pp. 83 ff. 180 ff. 209 ff. 269 ff.) of this Journal, there have been published extracts from Chapter I. of M. Senart's very valuable studies of the Piyadasi Inscriptions. We now propose publishing translation of his further studies in the same direction, forming the 2nd volume of his Piyadasi Inscriptions. For this publication the texts have been revised by him with the assistance of the better fac-similes which have become available since the original French edition was issued. For mechanical fac-similes, prepared under the direction of Mr. Fieet of the edicts

on the Lâṭ of Firūz Shāh or the Dehli Swālok Pillar, and on the Allahābād Pillar, see *ante*, Vol. XIII. p. 304 ff.—EDITIONS.

² The text of D. and also that of A. (see below), seem to have now been taken as far as possible, comparatively established by the fac-similes of Mr. Fleet, from which a reading was published by Prof. Biddler, *ante*, Vol. XIII. p. 306.

³ This translation in the original character, and the variants, are omitted in this translation. The latter are no longer necessary, now that the text of D. is established.

FIRST EDICT.

Prinsep, *J. A. S. B.* 1837, p. 581 (cf. p. 965); Burnouf, *Lotus de la bonne Loi*, p. 654 and ff

TEXT.

- 1 Dēvaṇāmpiyē Piyadasi lāja h'vaṁ āhā [...] saḍṇisati
 2 vasa abhisitēna¹ mē iyaṁ dhaṇṇamalipi likhāpitā [...]
 3 hidatapālātē dusaṃpatipādayē² aṇṇata agāyā dhaṇṇamakāmatāyā
 4 agāyā palikhāyā agāyā susūsāyā agēna bhayēna
 5 agēna usāhēnā [...] ēsa chu khō³ mama anusathiyā
 6 dhaṇṇapāpēkhā dhaṇṇamakāmāṭā chā suvā suvā vaḍḍhitā vaḍḍhisati chēvā [...]
 7 pulisā pi ca mē ukasā chā gēvayā⁴ chā majjhimā chā anuviddhiyaṃti
 8 saṃpatipādayaṃti chā alaṇṇa chapalaṇṇa⁵ samādapayitavā hēmaṇṇa aṇṇa
 9 mahāmāṭā pi [...] esa pi vidhi yā iyaṇ⁶ dhaṇṇa pālanā dhaṇṇa vidhānē
 10 dhaṇṇa sukāyana dhaṇṇa gōtīti [...]

NOTES.

1. The sign 𑀓 was formerly considered as representing *dda*; Dr. Kern (*Ind. Stud.* XIV. 394) has rightly identified it as the sign 𑀓 followed by the mark of the *virāma*. No one will hesitate to read, with him, *saḍṇisati*.

2. I have on a former occasion (I. 232) indicated *en passant* what I believe to be the true derivation of the words *hidata* and *pālata*. Burnouf (p. 655) identifies them with two adverbs; *idhatra* (with double locative suffix) and *paratra*, "used together, by an abuse of language common to popular dialects, as two neuter nouns." We escape from all the difficulties of such a conjecture,—difficulties on which it is needless to insist,—by taking the two members as abstract nouns, derived by the suffix *tā* from the words *hida* (*idha*) and *para*. The latter word can even be referred to *pāra*, in allusion to the Buddhist expression *pāraṇ gāṇṇa*, 'to cross to the other side.' The two words are here joined in a neuter dvandva, *hidatapālātāṇi*. A further process of derivation gives us the adjectives *hidatika*, *pāratika*, which we find at Kapur di Giri (X. 22 : XIII. 11) as *paratika* (not *paratrika*); the feminine *pāratikā* in its turn gives an abstract substantive (cf. *Mahāvastu*, I. 522) exactly equivalent to our *pāratā*. *Dusaṃpatipādayē* is certainly the participle, for *pādayē*, *pādayāṇi*. This exceptional resolution of *dya* into *daya* is found elsewhere, e.g. *Dhammap.* V. 33, where we have *dhammādayaṇa* for *dhammādayaṇa* (cf. in this edict itself *gāyā* for *grāyā*). Moreover, A. evidently read *pādayē*, for it is thus that we must restore the apparent *pādayē*. As for the sense, it is important to determine the exact shade of meaning. If, with Burnouf, we trans-

late it 'difficult to obtain,' we run the risk of contradicting the general intention of the edict. Whenever we come across the verb *patipādayati*, *sampatipādayati* in our inscriptions (cf. e. g. the detached edicts of Dh. and J.) it has the causal meaning indicated by the form. We must therefore translate 'Happiness here below and happiness in the other world are difficult (not to obtain but) to provide.' The king does not address himself to his subjects in general, but, as appears from the sequel, to his officers of all ranks, whom he charges with the moral and religious oversight of his people. It is to them, and to the cares of their office that the qualities next enumerated are indispensable. In fact this interpretation exactly agrees with the thought and intention manifested at the end of the VIth (rock) edict, in very analogous terms, and it will be recognised that the conditions indicated, *parikkhā* 'alertness in oversight,' *bhaya*, 'fear' of the king (cf. edict VIII. below) apply infinitely better to the officials in question, than to subjects in general.

3. The phrase *chu khō* does not indicate, as Burnouf thought, a consequence, 'also, for.' It indicates, as is shewn by the evidence of the synonym *tu khō* (e.g. G. IX. 5, 7) and the various passages where it is employed (e.g. G. IX. 8, 3, below VIII. 9, &c.), a slight opposition, 'but, now.' The conditions of which the king speaks are necessary and difficult to find, but, thanks to his instructions, they develop from day to day. It is necessary to read *anusathiyā* as one word, as an instrumental. With regard to the use of *suvā suvā* in the meaning of 'every day,' 'from day to-day,' cf. *Dhammap.* V. 229.

4. Burnouf's identification of *gēvayā* with *grāyā* appears to me as certain as it is ingenious

The neighbourhood of the epithets *ukasā* and *maḥimā* proves that the word should be taken, not in its etymological, but in its secondary sense of 'low, inferior, lowest.' Analogous examples will be found in the dictionaries, and I add the passage of the *Lal. Vist.* (549, 10), where *gāmīya* is, in this sense, placed between *hīna* and *pārthaḥjanika*. Regarding *anuvīdhījanīti*, cf. I. 232.

5. There can be no question of dividing the sentence before *alan̄*, nor is it necessary to change *saṃālapayitav̄*, as proposed by Burnouf. *Samālapēti* is in Buddhist language used in the sense of 'to convert'; the infinitive is governed by *alan̄*, and the whole phrase forms a development explanatory of *saṃpaṭipādājanīti*. From the well-established use of this verb, it follows that *chapalan̄* cannot be taken as an abstract neuter. It must designate collectively men who are thoughtless, easily lead away (cf. *Dhammap.* V. 33; *chapalan̄ chittan̄*). It is possible that *anuvīdhījanīti* and *saṃpaṭipādājanīti* have as an object *anusathin̄*, understood from the *anusathiyā* of the preceding sentence; but we shall see below, especially in the detached edicts of Dhauli and of Jaugada, *saṃpaṭipādājayati* or *paṭipādājayati* employed absolutely; so also we shall find the phrase *dhammānupāṭipattin̄ anupāṭipajati* (below, VIII. 3), but more usually *paṭipajati* or *saṃpaṭipajati* used absolutely. Hence, the translations 'to be, to walk in the good way,' and for the causal, 'to place, to cause to walk in the good way' appear to me to be those which best render the exact meaning of the verb. As regards *hēmācā*, i.e. *ēcam ēva*, which we meet subsequently in other edicts and also in the detached edicts of Dh. and J., cf. *Hēma-chandra*, Ed. Pischel, I. 271. The parallel versions prohibit us from supposing, with Burnouf, that anything is missing from the end of the line, to be completed as *am̄ta mas̄*; moreover this word would not suit the sense. The text is certainly complete here, but this certainty does not relieve us of any difficulty. If we consider the reading as entirely correct, we must consider *am̄tamahāmātā* as a compound signifying officials stationed at the frontiers, and, as a matter of fact, the Vth of the Fourteen Edicts tells us of *mahāmātras* charged with the duty of watching the border-populations. It is also natural that Piyadasi, always intent on extending his charitable cares beyond his own

kingdom, should expressly mention, after the officials of all ranks of the interior, those whose actions extended beyond (cf. Dh. Ind. det. ed.) Nevertheless, I have some doubts about this. The XIIth edict speaks positively of *mahāmātras* charged with the oversight of women, and, according to the Vth, the *dharmamahāmātras* had to busy themselves with the domestic affairs of all the members of the royal family. If we only changed *am̄ta* into *am̄tē*, and the correction is an easy one, we should find an allusion to these 'domestic officials.' The agreement of all the versions in reading *ta* nevertheless compels me to decide in favour of the first interpretation.

6. The phrase *yā iyaṃ* occurs again in the VIIIth edict, I. 7, in the same meaning, i. e. as equivalent to the Pali phrase *yā iyaṃ* 'to wit.' Although *iyaṃ* is often employed in our inscriptions as a neuter, I do not think that we are obliged to take *yā iyaṃ* as actually identical with *yā iyaṃ*. In the two places where it occurs, the first substantive which follows the pronoun is feminine, here *pālandā*, below *dayā*, with which it perhaps agrees. It is more difficult to fix with the necessary accuracy, the precise shade of meaning of the word *vidhi*. The word 'règle' (rule) appears to be the most exact equivalent in French. This translation agrees well with the sense properly given by Burnouf to the *vīdhāna* which follows.

To sum up, here is the translation which I propose:—

TRANSLATION.

Thus saith the king Piyadasi, dear unto the Dēvas:—In the twenty-seventh year from my coronation did I have this edict engraved. Happiness in this world and in the next is difficult to provide, without (on the part of my officials) an extreme zeal for the Religion, a strict oversight, an extreme obedience, a very lively sense of responsibility, an extreme activity. But, owing to my instructions this care of the Religion and this zeal for the Religion increase and will increase [among them] from day to day. And my officials, superiors, subalterns, and those of middle rank, themselves conform to and also direct [the people] in the Good Way, so as to keep steadfast the fickle-minded; so also, the overseers of the frontier countries. Now the rule is this; government by the Religion, law by the Religion, progress by the Religion, security by the Religion.

SECOND EDICT.

Prinsep, *l.c.*, p. 582 and ff; Burnouf, *l.c.*, p. 666 and ff.

TEXT.

- 10 Devānaṃpiyē Piyadasi lājā
 11 hēvaṃ āhā [.] dhammē sādhu [.] kiyāṃ¹ chu dhammē ti [.] apāsinavē bahukayānē
 12 dayā dānē sachē sōchayē cha khu² [.] dānē pi mē bahavidhē dānnē dupada
 13 chatupadēsu pakhivadichalēsu vividhē mē anugahē kaṭṭ³ āpāna
 14 dakhināyē³ aṃṇāni pi cha mē bahūni kayānāni kaṭṭāni [.] étāyē mē
 15 athāyē iyaṃ dhammalipi likhāpitā hēvaṃ anupatipajāntu chilāṃ
 16 thitikā⁴ cha hōtāti ti [.] yē cha hēvaṃ saṃpatipajisati sē sukaṭṭāṃ kachhatiti [.]⁵

NOTES.

1. The last facsimile, by Mr. Fleet, gives the reading *kiyaṃ*, not *kāyaṃ*. Even this form I can only analyze as equivalent to *ke iyaṃ*. *Iyaṃ* would be used for the masculine, which is in no way extraordinary in monuments in which the same form is constantly employed both for the feminine and the neuter, and in which the difference between the neuter and the masculine, in the singular, is almost obliterated by the extension of the termination *ē* to the former. This explanation appears to me much more probable than the comparison with the Sanskrit *kiyut*. It is not intended to determine the extension of the dhamma, but to indicate its nature.

2. Burnouf has well explained *apāsinava* in a general way. Only I do not think that we should look upon *āsinava* as a form which is independent of, although synonymous with the ordinary *āsrava*. It would be too isolated, an example, and, moreover, the word is easily explained by a simple mechanical process. *Āsrava* can, in our dialect, become *āshava* as we have in Pāli, *silāka*, *silésana*, *silūghati* *kilēsa*, &c. *Āshava* can again be changed into *āsava*, like the Pāli *uṇṇala*, *uṇṇala*, for the Sanskrit *lūṅgala*, *lūṅgala* (cf. Kuhn, *Beitrag zur Pāli Gram.*, p. 44). The versions of Radhiah and Mathiah help us to correct the word *sābhayē* at the end of the sentence. It is necessarily incorrect, and should be *sābhayē*, i.e. *śāmbhayaṃ*, a normal form. The *ti* of these two versions, comes naturally after an enumeration, but its presence is not absolutely necessary. In any case, we cannot, like Burnouf, begin the next sentence with *cha khu*, or even with *iti cha khu*. The latter phrase would be, in itself, possible at the beginning of a proposition, but, putting the sandhi of *sābhayē* or rather the enclitic form

ti, which would be inadmissible at the commencement of a sentence, out of the question, the *pi*, which follows *dānē* would no longer be possible after this accumulation of particles. *Cha khu* or *iti cha khu*, finishes and winds up the enumeration: *pi* takes up a new order of ideas; 'Also have I given many alms.'

3. There are two ways of understanding the expression *āpānadakhināyē*, if we take *pāna* as representing in Sanskrit *prāṇa*, or if we take it as representing *pāna*. Burnouf decided in favour of the former, 'Des faveurs leur (aux hommes et aux animaux) ont été accordées par moi, jusqu'au présent de l'existence.' Such a manner of speaking appears to me unnatural. The expression '*jusqu'à*,' 'even to' (*ā*) leads one rather to contemplate the indication of a favour so particular, so unexpected, that it constitutes a refinement of liberality. I would add that the term *anugaha* does not, in fact, appear to declare so bounden a service as the gift of life, but rather some work of supererogation. But above all, according to the context, the benefit must be applicable both to men and beasts (*dupadachaturpadēsa*). Now, we shall see that Piyadasi put certain limits to the slaughter of animals, that he pardoned some men condemned to death but nowhere does he speak of a general abolition of the death-penalty. I hence conclude that the only satisfactory interpretation consists in taking *pāna* in the sense of 'drink,' 'water,' 'even to securing them water;' and that the king allude to a work which he has several times mentioned with legitimate satisfaction, to the sinking of wells along the road sides (cf. G. 1st Edict). We shall see below (VIII. 2.3) with what visible complaisance the king enlarges on this point. This comparison may perhaps even suggest an altogether different

analysis. In this passage, the king boasts of having established many *āpānas*, inns or caravanserais, and *āpāna* can be taken as a word in itself. At the same time, one does not see exactly why the king should mention only this class of benefactions. The former construction has this advantage, that it implies many others, as we should expect from the use of the phrase *civillhē anugahā*. For the meaning of *dhakkindā*, which we propose here, we may perhaps compare *arjyadhakkindā bhavatu*, of the third line of the Wardak inscription (J.R.A.S., xx., 261ff); this, at least, is the reading proposed by Dowson. Unfortunately, the interpretation, and even the deciphering of this monument are too imperfect and too hypothetical, for the comparison to have much weight.

4. With regard to the spelling *ṛthitkā* of several versions, compare the analogous orthographies which I have collected in Buddhist Sanskrit, e. g. *Mahāvastu* I., p. 595. I need

scarcely remark that we should read *h'tūti*, the *ti* having been erroneously engraved twice.

5. With regard to *kachhātī* being equivalent to *karishyati*, cf. Vol. I. p. 123 of the original essays.

TRANSLATION.

Thus saith king Piyadasi, dear unto the Devas:—The Religion is excellent. But, it will be asked, what is this Religion? [It consists in committing] the least possible ill; [in doing] much good, [in practising] mercy, charity, truth, and also purity of life. Also have I given alms of every kind: amongst men and four-footed beasts, birds and inhabitants of the water have I performed varied benefits, even so far as securing them drinking water; many other meritorious actions have I also done. It is for this purpose that I have had this edict engraved, in order that men may follow it and walk in The Good Way, and in order that it may long remain in existence. He, who will thus act, will do that which is good.

A BUDDHIST STONE-INSCRIPTION FROM GHOSRAWA.

BY PROF. F. KIELHORN, C.I.E.; GÖTTINGEN.

This inscription was discovered in March 1848, by Captain M. Kittoe, in a mound from which the people were then digging bricks, at a village about 7 miles south-east of the town of Bihâr, in the Patna district of the Province of Bengal; and it was first edited, with an English translation by Dr. Ballantyne, remarks by Captain Kittoe himself, and a note by Mr. J. W. Laidlay, in the *Journ. Beng. As. Soc.*, Vol. XVII. Part I., pp. 492-501. The exact spelling of the name of the village where the inscription was found, has been somewhat difficult to make out with certainty. In Captain Kittoe's remarks, *l. c.* p. 495, the place is called 'Pesserawa,' but this must be an error. For, in the Hindi heading of the Sanskrit text, p. 492, we have 'Gusarāna,' and in Mr. Laidlay's note, p. 500, 'Gusserawa' instead; and in the volumes of the *Archæol. Survey of India* and in Sir A. Cunningham's *Ancient Geography of India*, Vol. I., p. 44, as well as in a paper by Mr. A. M. Broadley, which will be mentioned below, the name of the village is

given as either 'Ghōsrāwā' or 'Ghōsrāwan. According to information which I owe to Mr. E. H. Walsh and to Mr. Grierson, the name of the place, in all the village-papers etc., is written घोसरवान, but it is invariably pronounced घोसरवाँ, i.e. Ghōsrāvaṃ.

The importance of the inscription for the later history of Indian Buddhism was fully recognised by Captain Kittoe, who assigned it to the 9th or 10th century A.D.; and Mr. Laidlay rightly identified some of the places which are mentioned in the inscription. Captain Kittoe removed the slab on which the inscription is, to Bihâr, where he took fac-similes, and returned it afterwards to the village, where he had it fixed in a niche in the outer wall of a modern temple, having first engraved in English on the margin the date of its being recovered and set up (by Captain Kittoe) for preservation on account of Government.¹

Afterwards, the inscription was prominently referred to by Sir A. Cunningham, in his Reports

¹ According to Sir A. Cunningham, *Archæol. Survey of India*, Vol. XI. p. 172, the slab was pulled at Ghōsrāwā in January 1862, with the following words engraved on

the margin:—"Recovered and placed here by Captain M. Kittoe on part of Government, March 30, A.D. 1848."

son of Indragupta and his wife *Śrī* (Śrī), was born in a noble Brahmanical family, at *Uttarāgarahāra* (in the Jalābhāṭ valley) in *Uttarāpatha* (or Northern India). Annied to follow the teaching of Buddha, he went, after he had studied the Vēdas and the Śāstras, to the great *Kanishka vihāra* (in the neighbourhood of the modern Pēshawar), where he became the disciple of the teacher *Sarvajñasāma*, and, as it appears, formally embraced the Buddhist faith. He subsequently visited the *dharmasādhana* at *Mahābōdhi* (or *Boṭhi-Gaya*), and from there went to a *vihāra*, called *Yasōvarmapura*, the town of *Yasōvarman*, where he stayed for a long time, enjoying the patronage of the king, *Devapāla*. *Vīradēva* erected two *chaityas* on the hill *Indrasaila* (or *Girvāk*, about 5 miles south-west of *Ghōsrāwā*); and he was elected by the *saṃgha*, or assembly of monks, probably in succession to a monk named *Sarvabōdhi*, to preside over the monasteries at *Uttarāgarahāra* (the modern Baragaon, about 9 miles west of *Ghōsrāwā*).—It is hardly necessary to say that, with the exception of *Yasōvarmapura*, which by Sir A. Cunningham has been identified with the town of *Bihār*, but which may be an older name of *Ghōsrāwā* itself, all the places mentioned here are well known from the records of the Chinese pilgrims. Nor need I point out what valuable proof is furnished by the above short narrative, in support of the fact that Buddhism was still flourishing in the famous localities

mentioned, when this inscription was composed.

Unfortunately, the inscription is not dated, and we therefore are left to determine its date, primarily from the characters in which it is written, and from the statement contained in it, that *Uttarāgarahāra* was patronised by *Devapāla*. The test of the characters is, however, very evasive, a vague one, and there can be no doubt that the date spoken of is the Pala king or that name of the more immediate successors of that king, where we have a short inscription at *Nāgāra*, in the chronology of the earlier ruler, but the chronology is still so doubtful that even a seemingly valuable statement like the mention of the first number in the present inscription leads to no very satisfactory result. I therefore can only repeat here, what has been stated already by Captain Kittoe, that our inscription was probably composed some time between the middle of the 9th and the middle of the 11th centuries A.D. Judging merely from the characters, the forms of which appear to be considerably earlier than those of an inscription of *Mahāpāla*, of which I have an impression, however, I would assign it to the latter half of the 9th century, while the latest researches by Dr. Hoernle on the chronology of the Pala dynasty would rather bring it down to about the middle of the 10th century. I do not think that the inscription can possibly be later.

TEXT.

Om⁸

- 1 *Śrīmān*=*asau* *jayati* *sat*[⁹]*va-hita-pravṛtta-san-mānas-ādhibhigata-tat*[¹⁰]*va-mayō* *Munīndra*† *klēśānmanon* *dhṛita-nakra-d* *nāśa-d-ānta*† *saṁsāra*† *ra-sāgara-samutta-*
- 2 *ra-aika-sēru* || *Asy*¹¹=*āsmad-guravō* *va*(*ba*)*bhūvur=ava*(*ba*)*lāḥ* *sambhūya* *haritū*, *manah* *kā* *lajjā* *yadi* *kēvalō* *na* *va*(*ba*)*lavān-asmi* *trilōka-prabhu*† *ity-*
ālochayat=ō.
- 3 *va* *Mānasabhuva*† *yō* *dūratō* *varjitah* *śrīmān=viśvar=asōśam=ētat=avatāt=Vō*(*bō*)*dhā*, *Sa-vaprasuṇh* || *Asy*¹²=*Uttarāpatha-vibhūṣaṇa-bhāta-bhūmair-dēś-ōttamō* *Nā-*
- 4 *garahāra*† *in* *p*(*u*)*ṭṭā*† *tatra* *dvijātīr-uḥt-ōdita-vaiśa*(*mśa*)† *panna*, *nāma=Ēndragupta*† *na* *raja-sukhō* *na*(*ba*)*bhūva* || *Rajj*[¹³]*kaya* *dvija-varah*† *sa* *gṛi*-
- 5 *lanyā*† *yukti*† *varāḥ*† *kalaya*† [¹⁴]*malayā*† *ya*¹⁵*th=ēnduh*† *lōkah*† *pativṛata-kathā-*
peribhāvanāśa† *saṁkīrttanam*† *prathamam=ēva*† *karōti*† *yasyāḥ* || *Tābhyām=aḥjā-*
- 6 *vata*† *sutah*† *śuraśam*† *vivēkī*† *yō*† *vā*(*bā*)*la*† *ēva*† *kalitah*† *para-loka-vu*(*ba*)*ldhyā*†
sarvvā† *prabhōg*† *asubhag*¹⁶=*pī*† *grihē*† *viraktah*† [*pravra*]*jjayā*† *Sugata-śāsanam=abhyupē*(*pau*)-

⁸ *S. epigraph.* Vol. XIV. p. 164. The *Devapāla* of the *kuṅṅ* (or *Chōr*) inscription, mentioned on p. 165, and rediscovered at *Siren*, I think, is, in my opinion, not the *Devapāla* of the *Pala* dynasty, and his date, *Vikrama-Samvat* 1195 (not 1025), is therefore useless for the chronology of that dynasty.

⁹ From the impression. ¹⁰ Expressed by a symbol.

¹¹ Metre, *Vasantatilakā*.

¹² Metre, *Śrīśalavikrīḍita*.

¹³ Metre, *Vasantatilakā*; and of the next four verses.

¹⁴ This *malayā*, *ya*, was originally omitted, and is engraved below the line.

- 7 tum || Vēdān=adhītya sakalān kṛita-sāstra-chintāh śrīmat-**Kanishkam**=upagamyā
mahā-vihāram¹³ | āchārya-varyam=atha sa praśama-praśasyam Sarvvajñāntim=
anugamyā
- 8 tapaś=chachara || Sô=yam viśuddha-guṇa-sambhṛita-bhūri-kīrttēh śishyō snurūpa-guṇa-
śīla-yaśō-bhirāmah | vā(bā)lendu-vat=kali-kalaūka-vimukta-kāntir=vandyah
- 9 sadā muni-janair=api Vīradēvah || Vajrasanam¹⁴ vanditum=ēkadā stha śrīman-
Mahāvō(bō)dhim=upāgatō ssau | drashṭum ta[t*]ō sgāt=sahadēs[i]¹⁵-bhikshūn
śrīmad-**Yaśōvarmma**-
- 10 puram vihāram || Tishṭhann¹⁶=ath=cha suchiram pratipatti-sarāh śrī-**Dēva**¹⁷pāla-
bhuvanādhipa-lavdha(bdha)-pūjah | prāpta-prabhaḥ pratidin-ōdaya pūrit-āśah pūsh=
eva dārita-
- 11 tamah-prasarō rarāja || Bhikshōr¹⁸=ātma-samah suhṛid=bhuja iva śrī-Satya-
vō(bō)dhēr=nijō **Nālandā**-paripālanāya niyataḥ saṅgha-sthitē=yah sthitah | yēn=
aitau sphu-
- 12 tam=**Indrasaila**-mukuta-śrī-chaitya-chūḍāmaṇi śrīmanya-vrata-sam(m)vr̥tina jagataḥ
śrēyōrtham=utthāpitau || **Nālandayā** cha paripālitaḥ=cha satyā śrīma-
- 13 d-vihāra-parihāra-vibhūshit-āṅgyā | udbhāsītō=pi va(ba)hu-kīrtti-vadhū-patitvō yah sādhu
sādhur=iti sādhu-janaiḥ praśastaḥ || Chintā-jvaram samayatā rtta-jana-
- 14 sya dṛishṭyā Dhanvantarēr=api hi yēna hataḥ prabhāvah | yaś=ch=ēpsit-ārtha-
paripūrṇa-manōrathēna lōkēna kalpataru-tulyatayā gr̥hītaḥ || Ten=aitad=a-
- 15 tra kṛitam=ātma-manō-vad=uchchair=vajrasanasya bhavanam bhuvan-ōttamasya | sam-
jāyatē yad=abhivikshya vimānagānām Kailāsa-Mandara-mahādhara-śrīṅga-saṅkā ||
Sarvva-
- 16 sv²⁰-ōpanayēna sat[t*]va-suhṛidam=audāryam=abhyasyatā samvō(mbō)dhau vihita-
spriham saha guṇair=visparddhi vīryan=tathā | atrasthēna nijē nijāv=iha
vr̥i(bṛi)hat-puṇy-ādhikārē
- 17 sthitē yēna svēna yaśō-dhvajēna ghaṭitau vaṅśā(mśā)v=**Udīchipathē** || Sōpāna-²¹
māngam=iva mukti-p[uras]ya kīrttim=ētām(m)=vidhāya kuśalam=yad=upāttam=
asmāt |
- 18 kṛitv=āditaḥ sa-pitaram guru-vargam=asya samvō(mbō)dhim=ōtu jana-rāsir=as'sha
ēva || Yāvat²²=kūrmō jaladhi-valayām bhūta-dhātīm vi(bi)bhartti dhvānta-
dhvanī(mśi)
- 19 tapati tapanō yāvad=ēv=ōgra-raśmih | snigdh-ālōkāh śīśira-mahasā yāmatyaś=cha-
yāvat=tāvat=kīrttir=jayatu bhuvanē Vīradēvasya śubhrā || ||

TRANSLATION.

Om!

(Line 1).—Triumphant is that glorious chief
of sages (Buddha), who with his excellent mind,
striving for the welfare of the beings, found
out the system of truth; (and who), to those
whose nature is affliction, (is) the one bridge
for crossing the ocean of worldly existence, (a
bridge) the ends of which are difficult of
approach for (those) alligators—evils!

(L. 2).—May the glorious (*Buddha*), who
has his diamond-throne by the Bōdhi tree,²³
protect this whole universe!—he, from whom
the mind-born (Māra) drew far aloof, thinking,
as it were, that if his betters had, united, been
powerless to captivate the mind of (*Buddha*),
why need he blush for failing in strength,
single-handed, against the Lord of the three
worlds²⁴!

(L. 3).—There is an excellent country, known

¹³ The two aksharas *mbō* were originally omitted
and are engraved below the line.

¹⁴ Metre, Indravajrā.

¹⁵ Perhaps this sign for *i* has been struck out, so that
the *ish* would be *si*, not *ci*.

¹⁶ Metre, Vasantatilakā. ¹⁷ Originally *Dēvapāla*.

¹⁸ Metre, Śāradulavikṛita.

¹⁹ Metre, Vasantatilakā; and of the next two verses.

²⁰ Metre, Śāradulavikṛita.

²¹ Metre, Vasantatilakā. ²² Metre, Mandākrantā.

²³ See Beal, *Sa-yu-ki*, Vol. II. p. 115: "In the middle
of the enclosure surrounding the Bōdhi tree is the
diamond throne (*Vajrasana*). (It is composed of
diamond. . . . On this the thousand Buddhas of the
Bhadra-kalpa have sat and entered the diamond *sambhūti*;
hence the name of the diamond throne. It is the place
where the Buddhas attain the holy path."

²⁴ See, *etc.*, the opening verses of the *Nāgānanda*.
Boyd's Translation, pp 1 and 2.

SCALE .38.

by the name of **Nagarahâra**,²⁵ the land of which is an ornament to **Uttarâpatha** (the northern region). There, in a family which had risen higher and higher, was born a twice-born, Indragupta by name, a friend of the king.

(L. 4).—As the moon with its spotless digit, so shone that meritorious distinguished twice-born, united with his wife Rajj[ê]kâ, of whom people make mention in the very first place, when they ponder on tales of devotion to husbands.

(L. 5).—To them was born a son, highly endowed with discernment, who, even as a child, was filled with thoughts concerning the other world. He gave up his attachment to his home, though it was blessed with every enjoyment, in order that, by going forth as an ascetic, he might adopt the teaching of Sugata.

(L. 7).—Having studied all the Vêdas (and) reflected on the Sâstras, (and) having gone to the glorious great **Kanishka vihâra**,²⁶ he then, following the excellent teacher Sarvajñāsānti,²⁷ (who was) praiseworthy for his quiescence, gave himself up to asceticism.

(L. 8).—This Vīradêva, (being) thus the disciple of one who by his pure qualities had accumulated great fame, (and) pleasing by the fame of corresponding qualities and natural disposition, (was) always, like the new-moon, an object of adoration, even to sages. Inasmuch as his loveliness was free from the stain of the Kali-age.

(L. 9).—To adore the diamond-throne, he then once visited the glorious **Mahâbôdhi**.²⁸ From there he went to see the monks of his native country,²⁹ to the **vihâra**, the glorious **Yasôvarmapura**.³⁰

(L. 10).—Then staying here for a long time,

he, the quintessence of intelligence, being treated with reverence by the lord of the earth, the illustrious **Dêvapâla**, shone like the sun, endowed with splendour, filling the quarters with his daily rising, (and) dispelling the spread of darkness.

(L. 11).—He who, (being) a friend (dear) like his own self, being as it were the own arm of the holy monk Satyabôdhi,³¹ by the decree of the assembly of monks (*sangha*) was permanently appointed to govern **Nâlandâ**; (and) by whom, engaged in the vow of a *Sramaṇa*, there were erected for the welfare of the world these two holy *chaityas*, clearly two crest-jewels in the diadem of **Indrasaila**;³²—

(L. 12).—And who, on becoming the lord of the lady Great Fame, graced though he already was here by **Nâlandâ**, governed (by and) true (to him and) decorated by a ring³³ of famous *vihâras*, was well praised by good people as a good man;—

(L. 13).—Who, by (his mere) sight allaying the fever of anxiety of people in distress, verily eclipsed the power of even Dhanvantari,³⁴ and whom people, whose wishes he fulfilled by (granting to them) the objects desired, took to be equable to the tree of paradise, —

(L. 14).—He erected here for the diamond-throne, the best thing in the world, this habitation, lofty like his own mind, the sight of which causes those moving in celestial cars to suspect it to be a peak of the mountain Kailâsa or of Mandara.

(L. 15).—Practising the generosity of those who are friends of the beings, by offering up his all, as well as manliness, eagerly directed towards the attainment of perfect wisdom and

²⁵ In the immediate vicinity of Jalâlâbâd. See Cunningham, *Ancient Geography of India*, Vol. I. p. 13; Beal, *Southern*, Vol. I. p. 91.

²⁶ The *Saṅghaśrîma*, which was built by king Kanishka in the neighbourhood of the modern Peshâwar. See Beal, *l. c.*, Vol. I. pp. 103 and 109.

²⁷ I cannot understand why this word should not have been taken as a proper name in the previous translations. Compare such names as *Baddhasānti*, *Ratnâkaraṇṭhi*, *Dharmikaraṇṭhi*, mentioned by Tāranâtha.

²⁸ *i. e.*, either the great Bodhi tree, or the Mahâbôdhi *sanghaśrîma* at Gayâ, or Bôdhi-Gayâ itself. See Beal, *l. c.*, Vol. I. Introduction, p. x; Vol. II. p. 133; *Journ. Ind. As. Soc.*, Vol. XVII. Part I. p. 498; and *Archæol. Survey of India*, Vol. XI. p. 141, and Vol. XV. Preface, p. III.

²⁹ I am not quite sure that this is the right meaning of the word *sahabâsa* (or, possibly, *shatâsa*) of the original.

³⁰ Comparing the passage in line 7 *siddhant-Kanishka . . . mahâvihâra*, I ought perhaps to translate 'the glorious *vihâra*, called Yasôvarmapura,' although the word *śrîm* is prefixed to *Yasôvarmapura*. I am aware that Sir A. Cunningham has identified Yasôvarmapura

with the present town of Bihâr (see *Archæol. Survey of India*, Vol. III. p. 120 and p. 135; and also Vol. VIII. p. 76), and it would be very tempting to take *vihâra* in the above passage, as a proper name and to translate: 'From there he went . . . to Bihâr, the town of the glorious Yasôvarman.' Nevertheless believe that the word has been used in its ordinary sense, and that Yasôvarmapura was the name of the *vihâra* visited by Vīradêva. I do not deny that Yasôvarmapura may have been a name of Bihâr; but I consider it equally possible that it may have been the name of the very Ghosrâwâ, where the inscription has been found.

³¹ The beginning of the verse might also be translated: 'He who, being dear to the monks like their own selves (and being) as it were, the own arm of the holy Satyabôdhi,' Satyabôdhi may have been Vīradêva's predecessor at Nâlandâ.

³² Nâlandâ has by Sir A. Cunningham been shown to be the modern Barâzan, and Indrasaila identified with the hill Giryek. — *Ancient Geography of India*, Vol. I. p. 469.

³³ The dictionaries do not give this word *paribhâṣa*; but *pari*.

³⁴ The physician of the

vying with (*his other*) excellencies, residing here, while his high holy office was continuing, he hoisted the banner of his fame on the two poles³⁵ (*of his family*) in Udichipatha (the northern region).

(L. 17).—Whatever merit has been acquired by the erection of this edifice,³⁶ (*which is*), as it were, a staircase to the city of salvation, may through that the whole assemblage of

men, headed by the circle of his elders (*and*) including his parents, attain to perfect wisdom!

(L. 18).—As long as the tortoise bears the ocean-girded mother of all beings; as long as the sun with its fierce rays is shining, dispelling the darkness; as long as the nights present a pleasing appearance with the cool-splendoured (moon);—so long may the bright fame of Viradêva be triumphant in the world.

THE TWELVE-YEAR CYCLE OF JUPITER.

BY SHANKAR BALKRISHNA DIKSHIT: BOMBAY EDUCATIONAL DEPARTMENT.

(Concluded from p. 7.)

In the preceding remarks, my object has been to explain concisely the system of the Twelve-Year Cycle of Jupiter that is based on his heliacal risings; and the three methods for determining the *nakshatra* with which the heliacal rising takes place. I have now to make a few observations of a more general kind; and to introduce the other authorities of which I have spoken at page 2 above. Before doing so, however, I must refer more fully to another system, which also has been incidentally mentioned, of naming the *saṁvatsaras* of the Twelve-Year Cycle according to Jupiter's passage from one sign of the zodiac into another, with reference to his mean longitude.

The rule for that which I have named the mean-sign system, is thus given by the first Āryabhata¹ in his *Ārya-Siddhānta* or *Āryabhaṭīya*, Kālakriyāpāda, verse 4, — Gurubhagaṇā rāṣi-guṇās tv=Āśvayuj-ādyā Gurôr

abdâḥ — “the revolutions of Jupiter, multiplied by the signs (twelve), (*are*) the years of Jupiter, the first of which is Āśvayuja.” And it is given, in very similar words, by Brahmagupta, in his *Brahma-Siddhānta*, adhyāya xiii. verse 42, — Guru-varshāny=Āśvayujād dvādaśa-guṇitā Gurôr bhagaṇâḥ. In this rule, the revolutions (*bhagaṇa*) are meant to be taken from the beginning of the Kalpa, or of a Mahâyuga. But, for practical purposes, we need not go back so far. One Twelve-Year Cycle is completed in one revolution. And, therefore, we can determine the *saṁvatsara* for a given year, or for any given date in it, by taking Jupiter's signs, including the current sign, of the current revolution, and counting from Āśvayuja. In this system, the signs are intended to be taken, and in practice are taken, according to Jupiter's mean longitude. Now, suppose that on a certain day Jupiter's mean

³⁵ *van sau*, ‘two poles,’ or the two families (of his father and mother).

³⁶ According to Hémachandra's *Anukīrthasamgraha* the word *kṛt* also means ‘a palace’ or ‘temple’ (*prāsāda = kīrtan*), and this clearly is the sense in which it has been employed here. *Kṛtala*, according to the lexicographers, also is synonymous with *prāsāda*.

¹ There are two distinct and separate works, each bearing the name of Āryabhata as its author. The one published by Dr. Kern contains one hundred and eighteen verses in the Āryā metre, and is called *Āryabhaṭīya* in general and by the author himself; but it may, and justly so, be called *Ārya-Siddhānta*; and it is called so by many Hindu astronomers. The date of this work is Śaka-Samvat 121 expired (A.D. 499-500). The other, which, I believe, has not yet been printed, contains about six hundred and twenty-five verses in the Āryā metre, divided into eighteen chapters. This is the work that is usually called the *Laghu-Ārya-Siddhānta*. The date of it is not given. But, from internal evidence, I find that it is earlier than the *Brahma-Siddhānta* of Brahmagupta

(expired: A.D. 628-29); and there is a *Śaśvatī* (Śaka-Samvat

1072 expired; A.D. 1150-51). Its date, therefore, lies somewhere between these two limits. In the first verse of it, the author calls himself Āryabhata; and his work, a *Siddhānta*, without *Laghu* or any other epithet. In a manuscript copy of it, I find that it is named *Mihir-Siddhānta* at the end of some chapters, and *Laghu-Ārya-Siddhānta* at the end of others. For the sake of distinction and convenience, it is better to call the authors of these two works, the first and the second Āryabhata. The numbers of the revolutions of the planets, &c. given, as belonging to the *Ārya-Siddhānta*, in the Rev. E. Burgess' Translation of the *Sūrya-Siddhānta*, and in some instances those given by Prinsep (*Prinsep's Essays*, Vol. II ‘Useful Tables,’ p. 153) as belonging to the same authority, belong really to the second Āryabhata. Probably, when these gentlemen wrote, they had not themselves seen the *Siddhānta* of the first Āryabhata. Gen. Sir A. Cunningham, also, was not, it seems, aware of the two different Āryabhaṭas, when he wrote (*Indian Eras*, p. 83) “according to Warren the number of days assigned by Āryabhata to a Mahâyuga of 4,320,000 years is 1,577,917,500 in the south of India and 42 more in the MSS. preserved in Bengal.” Of these two numbers, the former belongs to the first, and the latter to the second Āryabhata.

longitude is 9 signs and 12 degrees; i.e. that he is in the tenth sign. Then, counting from Āśvayuja, we have Āśhādha, as the current *saṁvatsara* for the given day.²

The names of the *saṁvatsaras* of the **Sixty-Year Cycle**, also, — according to that which is usually called the northern system, but which is, in reality, the only truly astronomical system of it, and was current, as is shewn by many epigraphical quotations of it, in Southern India also, — are determined by Jupiter's mean place. And the rule is thus given in the *Sūrya-Siddhānta*, i. 55, — dvādaśa-ghnā Gurôr yāta-bhagaṇā vartamānakaiḥ | rāśibhiḥ sahitāḥ śuddhāḥ shashtyā syur Vijay-ādayaḥ || — “the expired revolutions of Jupiter, multiplied by twelve, (then) increased by the current signs (of the current revolution), (and then) divided by sixty, are (i.e. the remainder is) (the *saṁvatsaras* counted from) Vijaya as the first.” In fact, the Sixty-Year Cycle, and the Twelve-Year Cycle of the mean-sign system, are quite identical with regard to the day of the commencement of each *saṁvatsara*; and, consequently, with regard also to its duration, which, according to Jupiter's mean motion as given in the *Sūrya-Siddhānta*, is 361 days, 1 ghṛtī, 36 palas. The Twelve-Year Cycle of the mean-sign system, therefore, with regard to its other details, may be most properly described with the Sixty-Year Cycle, which I shall treat of fully on a separate occasion. And I have introduced the present brief mention of it, only because references to it are unavoidable in the following observations.

The other authorities for the heliacal-rising system, in addition to the *Bṛhat-Saṁhitā*, of which I have spoken, are as follows; — (1) **Parāśara** says — Kṛittikā-Rōhiṇish=ūditō

kshuch-chhastr-āgni-vṛishti - vyādhi-prābalyam Chitrā-Svātīr uditē nṛipa-sasya-varsha-kshēm-ārōgya karaḥ. — (2) **Garga** says — pravās-āntē sah=arkshēṇa hy=uditō yuga-pach charēt | tasmāt kālād ṛiksha-pūrvō Gurôr abdaḥ pravartatē || — (3) **Kaśyapa** says — saṁvatsara-yugē ch=aiva shashty-abdē³=ūgirasas sutaḥ | yan-nakshatr-ōdayam kuryāt tat-saṁ-jñam vatsaram viduḥ || — (4) **Rishiputra** says — yasmin tishṭhati nakshatrē saha yēna pravardhatē | saṁvatsaras sa vijñēyas tan-nakshatr-ābhidhānakaḥ || — (5) Also, in the following, **Rishiputra** quotes **Vasishṭha** and **Atri**, in addition to Parāśara, who is separately referred to above, — Tishy-ādika-yugam prāhur Vasishṭh-Ātri-Parāśarāḥ | Bṛhaspatēs tu Saumy-āntam sadā dvādaśa-vārshikam || Udēti yasmin māsē tu pravās-ōpagatō=ūgirāḥ | tasmāt saṁvatsarah — (6) In the **Samāsa-Saṁhitā**, a short work by Varāhamihira, we have* — Gurur udayati nakshatrē yasmin tat-saṁjñitāni varshāni. — (7) **Bṛhaspati**, as quoted in the *Kīranāvali*, a commentary by Dādābhāi on the *Sūrya-Siddhānta*, says: — yadā Gur-ūdayō bhānôr Gurôr abdas tad-āditāḥ. — (8) In the **Nārada-Saṁhitā**, Guruchārādhyāya, we have — yad-dhishṇy-ābhyuditō Jīvas tan-nakshatr-āhva-vatsarah. — (9) In the **Muhūrta-Tattva**, Guruchāra, verse 7, we have — dvṛ-ṛikshō= Gnēḥ Kārttikāt try-ṛiksha ishu-ravi-Śivō= bdaḥ sa yēn=ōdit=Ējyah. — (10) In the **Jyōti-shadārpaṇa**, adhyāya v., we have — yasmin abhyuditō Jīvas tan-nakshatrasya vatsarah. — It is unnecessary to translate these ten quotations; as the general purport of all of them is the same; viz. that “a *saṁvatsara* is to be named after that *nakshatra* in which Jupiter attains his rising.” — (11) In the remaining authority, the *Sūrya-Siddhānta*, the rule

² In his treatment of the Twelve-Year Cycle (*Indian Eras*, p. 26 ff.), Gen. Sir A. Cunningham opens the subject by quoting Kern's translation (see page 1 above, note 1) of the same verse in the *Bṛhat-Saṁhitā* which I use for the same purpose. But, for the rest, he altogether ignores the force of the reference to Jupiter's rising, and treats the subject as if the heliacal-rising system, described by me, did not exist at all. What he has deduced from the verse, is only the mean-sign system, which the verse does not really refer to at all: and in respect of which he is wrong in making the *saṁvatsaras* of both the Twelve-Year and the Sixty-Year Cycle, begin and end with the luni-solar years. The rules that he applies give, at the best, only the *saṁvatsaras* of the Twelve-Year Cycle by the mean-sign system, and of the Sixty-Year Cycle, that are current at the commencement of a given solar year: they do not provide for the essential point in both the cycles, viz. the determination of the exact day on which a given *saṁvatsara* of either cycle commences — I have not had an opportunity of

seeing the writings of Davis and Warren on this subject. But, with all due deference, I may safely say that the Twelve-Year Cycle by the heliacal-rising system, has hitherto remained quite unknown to European scholars. — I would take this opportunity of remarking that I can find no authority for the introduction, in Kern's translation, of the bracketed words “(during which Jupiter completes a twelfth part of his revolution).” Jupiter completes a twelfth part (vii.) of his revolution in about three hundred and sixty-one days; while the interval between two of his heliacal risings is about four hundred days.

³ From this, it appears that the *saṁvatsaras* of the Sixty-Year Cycle also, were originally determined by the heliacal risings of the planet. And corroboration of this is afforded by a verse of Varāhamihira, quoted further on. The above verse of Kaśyapa, evidently applies to the Twelve-Year Cycle also.

* I have taken this, and the preceding five quotations, from Utpal's commentary on the *Bṛhat-Saṁhitā*.

script copy,—*ēvam Āśvayujam ch=aiva Chaitram ch=aiva Brihaspatiḥ samvatsarō (raṁ) nāma(śā)ratē saptaitēda (? saptary-abda)-satē=dhikē* II.¹⁰ This verse seems to refer to the mean-sign system: though I can say nothing definitely about it, without seeing the context: of which I have not the opportunity at present. But, supposing that it does refer to the mean-sign system, still it is not unfavourable to the heliacal-rising system: for the same Utpala also quotes a verse of the same Garga, given in a preceding paragraph, in which Garga says—“when Jupiter, after dwelling together (*with the sun*),¹¹ rises and walks along with a *nakṣatra*, then commences the year of Jupiter, of which the first part (*of the name*) is the (*name of that*) *nakṣatra*.”

Not only that the heliacal-rising system is very early, but that it alone is the original system of the Twelve-Year Cycle, is self-evident. The heliacal rising of Jupiter is a natural phenomenon. No scientific apparatus is needed for the observation of it: nor are any calculations required.¹² But such is not the case with the passing of Jupiter from one sign of the zodiac into another, with regard to his mean longitude. No kind of apparatus can determine Jupiter's mean longitude. It is to be found only by calculations, the rules for

which must have been established after observations carried on during a very long time: to lay down the means of determining Jupiter's mean yearly or daily motion, is not a thing that can be accomplished in a few years. It seems, therefore, quite evident that the system of naming the *saṁvatsaras* after the *nakṣatras* in which Jupiter rises, *i.e.* the heliacal-rising system, is the only original one.

So much as regards the antiquity of the heliacal-rising system. Let us now look into its somewhat later use. Varāhamihira is later than the first Āryabhaṭa. And his verse, with which I have opened my account of the Twelve-Year Cycle, undoubtedly refers to this system. So, also, another of his verses—in the *Bṛihat-Saṁhita*, vol. 27, points to the same thing. It runs—*adyat Dhanishthāṁ samabhiprapannō*¹³ *Māghē yat=āvaty=ndayam Śūrējyaḥ* | *sha-lity-abda-pūrvah Prabhavaḥ sa pannaḥ prapadyatē bhūta-hitas tad=ublaḥ* II.—“when Jupiter, having come to the first (*nakṣatra*) Dhanishthā, attains (*his*) rising in (*the month*) Māgha, then commences that year, beneficial to beings, which is named Prabhava, the first of the sixty years.” Now, in eighteen centuries from the beginning of the Saka era, the Prabhava *saṁvatsara* has occurred thirty times. And, by approximate calculations, I find that Varāhi-

¹⁰ Gen. Cunningham also has quoted this verse (*Archæol. Surv. Ind.* Vol. X, p. 114): and in such a way, his authority giving *nīyat**, where Mr. S. B. Dikshit's MS gives *nīmayat**, as to show that, in the second half of it, we certainly have to read *nīmayat** *saptary-abda-sat**—J. F. F.

¹¹ *pravāśat** may be translated by “after having completed his journey,” *i.e.* having completed a revolution of some kind or another.

¹² The phenomenon, moreover, is one to which much attention has always been paid in India. Even in the present day, almost all the Hindu *Pāñchāngs* give the dates of the heliacal rising and setting of Jupiter. This is for religious purposes: since, when Jupiter is visible, some duties and ceremonies, such as investiture with the sacred thread, marriage, pilgrimages, &c. are not to be performed, and the dates in question are necessary, in order to know when he is visible, and when he ceases to be so. In *Pāñchāngs* printed in Malabar, the custom of naming the *saṁvatsaras* after the months is not in use. In fact, the Twelve-Year Cycle is now almost unknown to the people at large of the Dekkan. But in a *Pāñchāng* prepared by Jwālpātī Sīdhanthi, and printed in the Jñāna-śrīyogya Press at Madras, I find that the author, in the *saṁvatsara-phala*, after giving the two *saṁvatsaras* of the Sixty-Year Cycle, according to the northern and the southern reckoning, goes on to say—*sarvatra Gurudāyagāt* (*Chaitr*)-*īdā gṛahyāt*, “all over (India) a (certain) year (*i.e.* such *saṁvatsaras* as Chaitra, &c.), which depends on the rising of Jupiter is to be taken,” from which it is evident that some such rising-system as that described above is followed in this *Pāñchāng* from Madras. Also, in the *Chaitra-Pāñchāng*, prepared for the meridian of Jōdhpur in Mārṣād, and used there and by

Mārṣāhs in other parts of India, the *saṁvatsaras* are named as Chaitra-Varsha, Vaisākha-Varsha, &c., the system adopted in that *Pāñchāng*, now ver. for naming the *saṁvatsaras*, is the mean-sign system.

¹³ The reading that I give is from my manuscript copy. But, *śaśat* being very liable to confusion, the reading *adyat* (*Dhanishthāṁ samabhiprapannō*), which is given in some printed copies, may also be of some authority. By calculation, however, I find that Jupiter does not always stand just at the beginning of Dhanishthā at the time of his rising at the commencement of the Prabhava *saṁvatsara*. And I think, therefore, that the reading which I give is the author's original reading. I take *adyat*, to qualify the word *nakṣatra* as understood. And Varāhamihira calls the *nakṣatra* in question “the first” because his opinion was, I think, that Dhanishthā was the first *nakṣatra* of the Sixty-Year Cycle, as it was of the Five-Year Cycle of the Vedāng-Jyotiḥ-shāstra. Its verse—*śarvāḥ śakṣat* | *śamāṅkaḥ yadīśam sa Varshaḥ* | *syāt tad=īdāyagāt* (*Māgha*),—“when the moon and the sun, being in (*the nakṣatra*) Varsha (Dhanishthā), go together in the heavens, then there is the beginning of the Yuga (and of the month) Māgha,” when two he intends to reconcile—Kera would seem to have known only the reading *adyat* (*Dhanishthāṁ samabhiprapannō*). His translation, *Jour. R. As. Soc.* N. S. Vol. V p. 19 f.), which follows also the reading of *prapadyat** for *prapadyat**, is—“when Jupiter, on reaching the first quarter of Dhanishthā, rises in the lunar month of Māgha, then begins the first year of the cycle of sixty, named Prabhava, a year salutary to all beings.” And he adds the note—“*cf.* Davis, *Asiatic Researches*, Vol. III, p. 220. The word *abda* also means ‘degree,’ but is here rendered by ‘quarter,’ according to Utpala, who explains it by *pāda*”—J. F. F.]

Varāhamihira's assertion, though not quite correct, is nearly so by the heliacal-rising system. Out of the thirty occasions, Jupiter rose, according to the *Amānta* southern arrangement of the fortnights,¹⁴ twenty-six times in the month of Māgha; three times early in Phālguna; and once in Pausa, nearly at the end of it. And on many occasions he rose in the Danishthā *nakshatra*; and on some, in Śravaṇa. The assertion, however, is not correct for the mean-sign system. According to that system, at the commencement of the Prabhava *saṃvatsara*, which always begins when Jupiter, by his mean longitude, enters Kumbha or Aquarius, he evidently always stands in the middle of Dhanishthā.¹⁵ But the Prabhava *saṃvatsara* may begin, and as a matter of fact I find by calculation that it has begun, in any of the twelve months, as will be shewn when I treat of the Sixty-Year Cycle. It is evident, therefore, that the verse in question supports the heliacal-rising system. Moreover, the word *alaya* itself is used in it. It might be argued that Varāhamihira's rule (*Bṛihat-Saṃhitā*, viii. 22; Êk-aikam abdôshu nav-âhatêshu, &c.) for finding the *nakshatra* of Jupiter, has reference to his mean longitude; and, consequently, that it gives the mean-sign system. But it is absurd to suppose that so learned an astronomer as he, stating the rule that a *saṃvatsara* is to be named from the *nakshatra* in which Jupiter rises, did not know that the *nakshatra*, at the time of his rising, can be determined only from his apparent longitude. The reason why he gives a rule for finding the mean longitude only is, in my opinion, this:—Anyone conversant with Hindu mathematical astronomy, knows how tedious a task it is to find the mean longitude of a planet from the *ahargana*, or number of elapsed days, counted from the beginning of the Kalpa or of a Yuga. But, when once it has been found, it is much less tedious to calculate, from it, the apparent longitude by the general rules. So, Varāhamihira, I think, gives a simple rule for finding the mean longitude of Jupiter on a given day, and leaves to the astronomers the calculation of the apparent

longitude. Or, it may also be said, as the difference between the mean and the apparent longitudes of Jupiter, on the day of his heliacal rising, is not very much,—sometimes about five degrees and sometimes nearly nil, as I have found from several calculations,—Varāhamihira gives the simple rule for rough practical purposes only; leaving it to the astronomer to make more detailed calculations, when absolute accuracy is required. But, even supposing that the said verse of Varāhamihira implies the mean-sign system, it will only prove that he gives both systems.

Let us now turn to the **more modern period**. Of the authorities quoted above in support of the heliacal-rising system, the *Muhūrta-Tatva* and the *Jyôtiṣhadarpana* are comparatively modern. The author of the first is the father of the well-known Gaṇêśa Daivajña, the author of the *Grahalāghava*; and, therefore, its date is about Śaka-Saṃvat 1420 expired (A.D. 1498-99); and it was written at Nandgaum on the western coast, about forty-five miles south of Bombay. The date of the second, as I have determined from certain data in it, is Śaka-Saṃvat 1479 expired (A.D. 1557-58); and it was written at Koṇḍapalli, somewhere in the Karpātaka country. And, in addition to these two, a third reference to the heliacal-rising system has been given in note 5 above, from Raṅganātha's commentary on the *Sūrya-Siddhānta*. The date of this commentary is Śaka-Saṃvat 1525 expired (A.D. 1603-1604); and it was written at Benares. These details suffice to shew that the heliacal-rising system is referred to in works of a modern period, and belonging to different parts of the country.

It is true that **the use of the Twelve-Year Cycle is rare**. This is shewn by the fact that some astronomical works do not refer to it in either system, though it would not have been beyond their sphere to do so; and by the fact that, out of many hundreds of inscriptions, only seven have been found, mentioning the *saṃvatsaras* of it.¹⁶ But, if the use of the heliacal-rising system is rare, the use of the

¹⁴ I have followed the *Amānta* arrangement here, as also in Table III. on page 6 above, because it is always this arrangement that is actually taken in astronomical works for calculation.

¹⁵ The sign Kumbha commences in the middle of Dhanishthā and ends at the end of the third quarter of

Pûrvâ-Bhûdrapadâ

¹⁶ viz. the five records of the *Mahicayas* Hs-tin and Sankshobha, belonging to the Early Gupta period and territory; and the two grants of the Kadamba chieftain Mruçavarman (*Ante*, Vol. VII. p. 35. and Vol. VI. p. 24) from the Belgaum District

mean-sign system is still more so. The *saṃvatsaras* mentioned in the four records of the Early Gupta period, which give full details for calculation, are proved to belong to the heliacal-rising system. And, while I have been able to quote no less than eleven authorities referring to that system, a distinct reference to the mean-sign system is to be found in only two; viz. the first Āryabhata and Brahmagupta, as quoted above. If to these we add an interpolated verse in the *Siddhānta-Sirṅgāṇi*, and also hold that Garga and Varāhamihira give the system, even then the number comes to only five.¹⁷ And in about eight of such works as would be expected to refer to the system, of a date later than A.D. 1478, which I have examined, I find a reference to it in none at all.

Looking to the present time, if the mean-sign system is used in one part of the country, the heliacal-rising system is used in another;¹⁸ while, in others, both systems are almost, if not quite, unknown. The mean-sign system is doubtless the more convenient of the two: since the duration of the *saṃvatsara*, roughly three hundred and sixty-one days, approaches so near to that of the solar year; and the omission of a *saṃvatsara* occurs only once in about eighty-five years. And this point of convenience seems to be the reason for which the system was invented by the astronomers. But, as both the systems are given in astronomical works, both of them must certainly have been actually used. And such will always be the case, as long as those works exist.

CONFUCIUS AND HIS MISSION.

BY DR. EDKINS: PEKING.

There is no spot in China held more sacred than the tomb of **Confucius**. It lies midway between Peking and Shanghai, and is about 400 miles distant from each of these cities. The lineal descendant of Confucius resides here, and attends to the sacrifices and to the careful preservation of the various antiques which are here deposited. The country is flat, but sixteen miles away is a small hill called Ni-shan. In the year 552 B.C. the wife of a provincial scholar, respectable in station, might have been seen approaching this hill to worship. She offered a prayer to the spirit of the hill and returned. She was dressed in a somewhat rough-looking grey silk robe. The sleeves were deep and full, covering her hands. The left portion of the robe was made full enough to cross under the neck over the right portion of the robe and was held in its position by a girdle tied in front. The feet were completely covered. The next year a son was born to this lady, and his parents gave him the name Kieu, or 'hillock,' in remembrance of the prayer. Two days before his birth, it is said, a beautiful unicorn was seen near to the house called the *chi-lin*. This creature being seen is an omen that a sage is about to be born. He

resembles a deer in shape but has scales like a dragon and fleshy horns, and never appears but as a portent of some great event.

At six years of age **Confucius** shewed great fondness for imitating ancient ceremonies, and persuaded his companions, instead of any rougher play, to join him in mimicking observances connected with worship and with funeral rites. He went to school at seven years of age, and his schoolmaster's name is recorded as Ping-chung, who was a magistrate acting at Tung-ngo, a place still in existence, and its name preserved on the map of the province of Shan-tung. In pictures, the master sits under a tree, and a few scholars, the school companions of Confucius, are seated on stools irregularly placed near to the master's table.

At the age of seventeen **Confucius** accepted a post which required him to be in charge of the market-bargaining with the people. He inspected articles and prices of goods brought to market, and decided upon the correctness of weights and measures. He married the daughter of his superior in office in his nineteenth year. When his eldest son was born, the ruler of the Loou kingdom, under whose jurisdiction he had been acting as an officer of markets, sent him

¹⁷ A verse containing a reference to the system is given as belonging to Śrīpati in Panhit Bapu Deva Shastri's edition of the *Siddhānta-Sirṅgāṇi*, p. 13, note.

but I do not find it in the *Ratnamālā* of Śrīpati.

¹⁸ See note 12 above.

as a present a carp, and Confucius therefore named his son Li, that being the Chinese word for 'carp.' Native artists represent the sage as standing at his door with folded hands, prepared to receive the platter of fish from the servant who accompanied the official messenger of the prince.

Confucius, while still young, was a diligent inquirer into ceremonies, and it is mentioned that he visited the ancestral temple of the sovereign of Lu to enquire into the details of worship. The harp, the bell, and the musical stone, the vases in which the offerings were placed, and the other implements used in sacrificing, were all in turn the subjects of his questionings. The intense interest shewn by him in ceremonies was one of the reasons why he attained, while comparatively young, the reputation of a sage. In one of a hundred scenes engraved in China to accompany biographical notices of Confucius, may be seen the master seated at a table with his pupils around him. Two new disciples are just entering. They are grave men coming to consult the sage. They do so because they have been recommended by their instructor, just deceased, to rely in future on the aid of Confucius in their studies. In the *Great Instruction*, the first among the *Four Books*, there is a sentence which has become very popular—"Let justice be your profit." In a kingdom, gain is not to be considered as gain. Its gain will be found in justice. That is, the aim of men must be to do justly and to regard this as prosperity. These were, it is said, the words of a forefather of the dying statesman, who recommended his pupils to follow the teaching of Confucius. With him they would be morally safe. This sentence from the *Great Instruction*—"Gain will be found in justice"—is a great favourite, and is frequently seen written on the doors of tradespeople in China in interchange with such sentences as "Those who are loyal and filial will long maintain their family prosperity." At the present time the same sentence is often quoted by the Chinese in defence of their conservative policy. If they are advised to adopt railways and the foreign method of working mines, in order to increase the material prosperity of their country, they reply that this would be to invert the teaching of the sages by putting gain

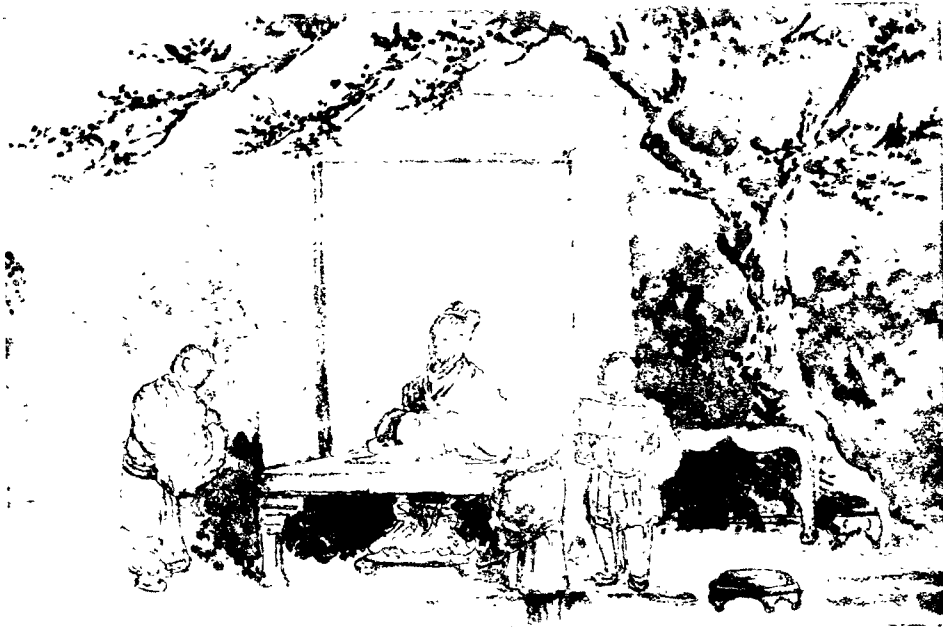
above justice. When statesmen use this language they mean that they prefer to hold firmly to Confucianism, but it is not unjust to say that the real cause of their want of willingness to inaugurate improvements is that they possess too much indolence, timidity, and narrowness of view, to allow of their making any decided progress, willingly at least.

Confucius went on a visit to the Chow country, the imperial domain. He is usually represented as travelling in a carriage drawn by two horses, the gift of his sovereign. He would proceed westward for ten or twelve days to reach the old capital of the Chow emperors. He there saw the founder of Taoism, known as Lau-tan. In the modern engraving contained in the hundred pictures of the life of Confucius above referred to, Lau-tan is an old gentleman, sitting at a table on which a harp lies. This he plays. He has a high forehead deeply marked with the lines of age. Confucius is 51 years old, grave, intelligent and polite. He asks information as to the ceremonies of the Court. Lau-tan, being an officer of many years' standing, is well able to answer his enquiries. On parting he said to his visitor—"Not being rich, I have no valuable things to present to you. The good man, when parting, speaks his thoughts. It is robbery for me to claim to be good, but I speak my thoughts; and this I say, that with intelligence you distinguish deeply and are bold to advise even if death be near. Your views are broad; and even when dangerous to yourself you will expose men's crimes. As a son, you regard yourself as entirely belonging to your father and mother, as a subject, as entirely belonging to your prince." This interview is mentioned in the life of Confucius, written about 100 B.C. by Si-ma-tsien. In the extant sculpture of this visit made about the year A.D. 180, Lau-tan stands leaning on a staff. Confucius presents him with a bird as a gift, and another bird flying near is added as an ornament. Both the sages wear a flat-crowned hat with turned-up brim. There are no characteristic features, nor any attempt to express the greatness of the two sages. The merit of the sculptured group is that of representing the customs of the time. The costumes, the usages, the stamp of Chinese antiquity are there. In the artist's mind the two sages are

Portrait of Confucius.



Scenes in the life of Confucius.



grandeers of the Cheu dynasty and nothing more. In the hundred pictures the conception of the Sung dynasty appears, and here the accessories are in keeping. Art was then improved. The philosophy of the tenth, eleventh and twelfth centuries, had followed the poetry of the seventh, eighth and ninth. Together they had completed the ideal of antiquity. Men such as Confucius and Lau-tan obtained a conventional treatment in accordance with their historical importance. Here lies the difference between the Confucius of the Han dynasty artist, and that of the Sung dynasty.

Another of the hundred pictures represents **Confucius** as enquiring respecting ancient music from an officer of the Chow kingdom, named Chang-hung. Confucius is on the right, as guest. Behind the host is a table on which are placed a musical stone and a bell. To the right of Confucius is a boy with a harp. Near to him two pupils of Chang-hung are placed by the artist to fill the picture on that side. They are listening to the conversation. Another pupil adjusts the musical stone. The remainder are variously occupied on the left with a harp or a book. The conversation convinces Chang-hung that Confucius is a sage of the highest rank. He mentions his opinion to a friend, and remarks that the ancient kings were in manner complaisant and obliging. "They sought knowledge from every source and carefully retained it. They searched into the nature of things without ever resting. Is not Confucius a sage of the same rank as they?" To this his friend replied, "The good usages of the ancient sages were sunk into disrepute. The ceremonial and the music of Yau and Shun were in a state of decay. The aim of Confucius was to restore them." Confucius heard this and said, "I am not a sage. I dare not take to myself this honour. I am only one who is fond of ceremonies and music." In the Chow dynasty the chief musician was also the chief educator. It was, therefore, natural that Confucius should attribute to music a first-class importance. When he heard performed the ancient music of the emperor Shun, it is said that he was deeply affected. For three days afterwards he could not distinguish the special flavour of animal food. The fact is that the traditions which had reached China, of the rule of wise kings of antiquity, were pervaded by

the notion of the mild force of example and the power attendant on a good and pure life. The ancient kings renovated their contemporaries by music as well as by moral teaching, and their high character as regenerators of society is understood to spring from the possession of a mild harmonizing genius of which the musical faculty was the outward sign. The ancient idea of a model government is, with the Chinese, neither commercial nor military, but moral. The ideal Governor is a civilizer, who wins the hearts of the nation by justice and benevolence.

After serving the State as Chief Minister until he was 57 years of age, Confucius retired, and occupied himself with editing the classics. In the ancient poetry he found the glorious example of Wen-wang carefully elaborated. The body of words were combined in this ideal with high moral wisdom. Such a man might be a model for prince and people. So also were Yau and Shun, Yü and Tang, examples of the highest class as men, as kings and as sages. Confucius felt his mission to be the preservation of the words, works, and historical significance of these men, for the benefit of posterity. His eye rested on the past. He was by temperament conservative. He felt a supreme dislike for bad moral conduct, for tyranny, for crime and all breaking away from good tradition. With this in his mind he undertook to edit the classics. His official life and his travels had prepared him for this. He had good opportunities, and he did what he could with the documents he was able to consult.

When Confucius undertook to edit the classics, with the purpose of perpetuating the good example and teaching of the great men of antiquity, he found that there were **five subjects to be treated**. These were history, poetry, ceremonies, music and divination. The **history** he had to preserve was the royal chronicle of the time of Yau and Shun, 2356 to 2205 B.C.; the chronicle of the Hia dynasty, 2205 to 1766 B.C.; that of the Shang dynasty, 1766 to 1122 B.C.; and that of the Chow dynasty, 1122 B.C. to his own times. The **poetry** he found in existence was partly royal, or official, and partly popular. So far as it was official, it was written by official poets, for use on occasions of sacrifices, banquets, marriages and

other state occasions. Chow-kung wrote a part of the local songs, and the other portions of these songs were made official by their reception into the royal collection. Whether Confucius rejected some or not, is a debated question. Yuen-mei says no. Chau-yi says he rejected more than 200. Both of these learned scholars belonged to the last century. Legge thinks Confucius did nothing to the book. But, however that may be, it has many sweet pictures of early manners. It has high praise for sages and for the virtuous. It sings of battles, of the harvest field, of the hunt, the banquet, and the sacrifice. It boasts of no epic grandeur, but it has idyllic scenes, which please a refined taste in love with the primitive and the antique. Confucius also discoursed on the importance of **ceremonial observances** for the king, the officer and the private man. There are three classical works on ceremonies. They describe in detail the laws, the grades and duties of office, the rules for marriages and for funerals; in short, all the ancient institutions and customs of the land. But how far Confucius had his hand in them is not known. Nor can we now learn what he did in preserving the ancient **music**. This, however, we know, that in one of the three classical books first mentioned there are preserved a few notes of very ancient sacrificial melodies, enough to tell us that such music as they then practised was slow and solemn, and consisted of four or five notes only. The lute, the paupipe, the bell and the musical stone, were the favourite instruments. Dancing accompanied the music, and this was also slow and solemn. The object of both was to inspire all persons with reverential feelings suitable to a religious service. Confucius had to decide on all these things, and, lastly to edit **the Book of Divination**. When he grew old, he made this his chief study. It was supposed to contain the most profound results of the teaching of the sages. In it also there was much of a frivolous nature. This, however, he allowed to remain. To tell fortunes by straws, is not a very dignified occupation. Yet the sages of China had to countenance it, and to read with respect a multitude of recorded instances of divination, because they were enshrined in a book belonging to the ancient sages and

possessing their authority. On the other side, it should be said, that there are many good moral statements in this old book. As a picture of what the Chinese thought in the twelfth century before Christ it is indeed invaluable.

This book and the others constitute **the Bible of the Chinese**. The great credit of Confucius amongst his countrymen is based on his repute as an Ezra in fixing the canon, besides being generally their chief guide in education, statesmanship and morality. If we take this book which comes down or dates from the age of Eli and Samuel of Hebrew history, and turn over its leaves,—a book, let it be remembered, which 200,000,000 of our fellow men regard as their most sacred treatise,—what do we find? Let it be the forty-eighth oracle. It is the oracle of the well. Under the figure of a well the words are,—“When you change a city, you do not change the well. The water grows no less nor does it increase. To those who come and those who go, the well is still the well. They draw up water. When the rope is yet not at the top, if the bucket breaks it is unlucky.” In the figure itself, the idea is that of wood going into water. The lesson drawn is the need of care in government to avoid a catastrophe. Cities change, but monarchy and law continue to rule. Other ideas similar to these are drawn from the oracle. This example gives a very good notion of the most admired of the Chinese classics, of its antiquity, and the style of comment with which for 3000 years the Chinese have been accustomed to discourse upon it. A good portion of this ancient manual of divination is even older than 3000 years. It is, therefore, very full of interest, since there is no country, except the land distinguished by the Christian revelation, which has retained a literature fortified by historical and chronological data uninterrupted during the flight of so many ages. This was the kind of book that Confucius studied when he was advanced in age. Perhaps he admired in it not so much its oracular ambiguity as the clear moral sentences and a certain breadth of view which the reader meets with here and there when the authors are throwing glances at the outer universe. A philosophy of nature here comes upon the scene which was destined to exert an immense influence and to have a

Scenes in the life of Confucius.



long career. It aims to reduce all existence into groups, to embrace nature, in all her aspects, in one comprehensive whole, and to bring the universe, by means of steady and profound thought, under the control of the sage. It was in this field of thought that Confucius loved to expatiate when he was in the maturity of his powers. With it harmonized, not unsuccessfully, the philosophy of the Chung-yung, that is of the *Invariable Mean*, a book published by his grandson, which contained in it the philosophical principles held by Confucius.

The portrait of Confucius here given,—from a drawing (taken from Chinese woodcuts) by a lady friend of the writer,—is not of the Han dynasty tradition, but that of the Sung dynasty, the result of later criticisms. When Buddhism led the Chinese to be in love with idolatry, they made pictures and images

of various Taoist gods, and at last it occurred to them to make use of images in the temples of Confucius. At the time of the invention of printing, the art of wood-engraving became common, in the eleventh and twelfth centuries. In memoirs of Confucius, and in books containing an account of his temple and tomb in his native city, it became a common thing to introduce a portrait of the sage. This was ideal rather than real; and it represents what the Chinese of the middle ages thought Confucius ought to have been in feature and in dress.

In the last scene the sage is standing before a tombstone, pencil in hand, inscribing the name of an ambassador from the Woo country, who was buried there, and whom Confucius praised for his economy in the expenses of his own funeral and for his acquaintance with the mysteries of philosophy.

MISCELLANEA.

PROGRESS OF EUROPEAN SCHOLARSHIP.

No. X.

Zeitschrift der Deutschen Morgenländischen Gesellschaft (Journal of the German Oriental Society)

(a Vol. XL. Part III. (1886):—

Professor David Kaufmann opens the part with an article on *Ibn Saruk's Hebrew Dictionary, Menachem*. He urges the necessity of critical editions of Hebrew works of the middle ages. He takes the *Menachem* as his text, and shows the great differences between the printed text of Filipowski (London, 1854) and the available MSS. The article is a purely critical one and cannot be summarized.

Signor L. Morales follows with an interesting paper on the book of the *Entertaining Stories of Bar Hebraus*. The MS. containing this, forms a portion of the *Syriac Codex* No. 173 of the Vatican Library, which was written in the year 1333 A.D. The collection contains about 700 sayings and anecdotes, some of which Bernstein has published in his *Chrestomathia Syriaca*. The work is divided into the following chapters; from each of which the author gives extracts (text, translation and vocabulary).

Chapter I. Useful sayings of Greek Philosophers.

„ II. Useful sayings of Persian wise men

„ III. do of Indian do.

„ IV. do. of Jewish do

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| Chapter V. | do. | of Christian anchorites |
| „ VI. | do. | of Muhammadan kings and wise men. |
| „ VII. | do. | of doctors and the learned. |
| „ VIII. | do. | of Arabian ascetics and reverends |
| „ IX. | Anecdotes of physicians, and of what is connected with them. | |
| „ X. | Selected Fables concerning the speech of irrational animals. | |
| „ XI. | Anecdotes concerning those who interpret dreams and deal in magic. | |
| „ XII. | Anecdotes concerning rich and magnanimous and generous men | |
| „ XIII. | Anecdotes concerning covetous and avaricious men. | |
| „ XIV. | Anecdotes concerning men of business. | |
| „ XV. | Merry anecdotes concerning mimes and players. | |
| „ XVI. | Anecdotes concerning boorish and stupid men. | |
| „ XVII. | Anecdotes concerning fools and madmen. | |
| „ XVIII. | Anecdotes concerning thieves and robbers. | |
| „ XIX. | Wonderful anecdotes and adventures. | |
| „ XX. | Physiognomical signs mentioned by the wise. | |

To Indian readers the third chapter will naturally be the most interesting, and the following extracts are therefore taken from it:—

(Leaf 90.) "It is said that when any one dies in the house of an Indian his friends arm themselves, go before his door, and say, 'Show us him who hath slain thy beloved, that we may slay him.' If reply is made, 'The unconquerable invisible is his murderer,' they say, 'Grieve not all too much over something against whose power neither thou nor we can fight.' In this manner console they the mourners."

"One of them (the Indians) said, 'The wound of the spear healeth quickly, but wounding by the word is unhealable'."

"Another said, 'The appetites of this world are like the water of the sea, no matter how much a man may drink thereof, his thirst remaineth ever as great'."

"Another said, 'Wine hath four properties which it giveth to those who drink it. First, it hath the property of the peacock, i.e. his (the drinker's) colours and motions become beautiful; then the property of the ape, for he beginneth to joke with everyone; then the property of the lion, for he trusteth in his strength and becometh proud; and lastly, the property of the pig, inasmuch as he maketh himself inordinately drunk, walloweth in the mire and finally speweth out filth.'"

(Leaf 91) "Another was asked, 'What does a woman without a man resemble?' and he answered, 'A river without water.'"

One more example, taken from the tenth chapter of this old Syriac collection of folk-lore, may be given on account of its close connexion with a well-known Indian fable:—

(Leaf 115) "The wolf, the fox, and the lion joined in partnership, and caught in their hunting a goat, a doe and a hare. Then said the lion to the wolf, 'Divide them amongst us.' The wolf said 'The goat for thee, the doe for me, and the hare for the fox.' When the lion heard this he waxed wroth and sprang on the wolf and killed him. Then said he to the fox, 'Do thou divide them.' Replied the fox, 'The goat for your breakfast, the hare for your dinner, and the kid for your supper.' Then said the lion to him, 'From whom didst thou learn this fair division?' The fox replied, 'From the wolf, your Majesty, who lieth before thee.'"

Dr. Adolf Baumgartner follows with a paper on the Armenian work on Rhetoric, entitled the

Book of the Chrie, by Moses of Choren. The rhetoric of this author, written in the tenth century, consists of ten books and an appendix. Each book is devoted to a distinct rhetorical artifice, and commences with a definition, followed by a number of examples of the artifice dealt with. The titles of each book are given in Armenian; the following are the Greek translations:—

1. περὶ χρείας.
2. περὶ γνώμης.
3. περὶ ἀνασκευῆς.
4. ὁρος χοινοῦ τύπου.
5. ὁρος εὐχλωμίου.
6. περὶ ψόγου.
7. ὁρος συγχρίσεως.
8. ὁρος ἡθοποιίας.
9. ὁρος εὐφρασεως.
10. ὁρος θέσεως.

The work is an imitation of the *Progymnasmata* of Aphthonius, or of Theon, or of both. The subjects of the origin and contents of the work are dealt with at considerable length.

Dr. M. Heidenheim contributes a controversial article on a new edition of the text of I. Samuel.

Dr. Adolf Fr. Stenzler gives an interesting note on the **असिधाराव्रतं** which is mentioned in the 13th book of the *Raghuvamśa*, in the *Kathā-Sarīt-Sāgara*, and in the *Pāñchatantra*. Mallinātha's commentary on the first passage is quite unsatisfactory, but Dinākara's supplies the needful explanation. He says **एकस्यमिव शय्यायां मध्ये खड्गं निधाय स्त्रीपुंसौ यत्र ब्रह्मचर्येण शयाने तदसिधाराव्रतम्**, 'if a woman and a man on one and the same bed place a sword between themselves, and so remain in chastity, it is called the vow of the sword-blade.' This is borne out by the Old German custom mentioned by Jacob Grimm in his *Deutsche Rechtsalterthümer*, p. 168;— 'It was an ancient custom, if a man slept by a woman, whom he did not wish to touch, for him to place a sword between them, and to lay himself down.' He then quotes numerous examples. K. Weinhold (*Die deutschen Frauen*, I. 348; II. 9) relates a similar custom.

Dr. Stenzler concludes, 'It would not be too rash to conclude from the above coincidence, that this custom, like many others, has been preserved from the most ancient times in various branches of the Indo-Germanic stem. That Mallinātha does not appear to have known more about it, can be explained by the custom having disappeared in his country in the far south, and being no longer there remembered.'

¹ In a subsequent note (p. 771 of the same volume) Dr. Stenzler mentions that it has been brought to his notice that this expression has been previously dealt

with by Professor Weber in his treatise '*Ueber eine Episode des Jāmuni-Bhārata*'. The vow is there called the *aspattrarātam*—[I may note that the same custom

A short note by Professor O. Bohtlingk suggests a textual emendation to Vasishtha I. 22; and in connexion with *id.* II. 35, quotes some curious instances of false etymology.

Dr. G. Buhler contributes a reply to a former article of Dr. Bohtlingk's on *Apastamba*. The paper principally deals with questions of textual criticism.

Dr. Ernst Kuhnert gives us an interesting paper on **Midas** in Legend and in Art. He examines the **Midas myth** from its earliest form to its latest development, and concludes that it is a mixture of the ancient **Silenus myth** with reminiscences of an actual powerful king of Phrygia named Midas. He then traces the various known specimens of ancient art representing episodes in the legend.

The number concludes with a notice by Signor Ign. Guidi of a short Syriac life of the Patriarch Sabrisho (596-604 A.D.). The text is given in full. The MS. from which it is taken is *Cod. Vatic. Syriac.* 183. fol. 367. a2.

(b). Vol. XL Part IV. (1883).

The number commences with the historico-heroic poem of Ibn Al Mu'tazz entitled **Mu'tazid as Prince and Regent**. The text with full commentary and translation into German is given by Dr. Lang. The text is founded on the MS. of the Bibl. Nat. at Paris, No. 1439, written in the year 1007 A.H. The poem sings of Abū'l 'Abbās bin Al-Muwaffaq from his first appearance (266 A.H.) to his death (289 A.H.). The entire text, and a portion of the commentary and translation, are here given.

Dr. M. Klamroth continues his interesting paper on the **Greek physicians** mentioned by Al Ya'qūbi.

Dr. Philipp next deals with the pronunciation of the **Semitic letters** usually represented in the Roman character by *w* and *y*, and in the Arabic character by *و* and *ي*. After a minute comparison of the use of these letters in a number of Semitic languages, the author comes to the conclusion that we may assume that originally they were only spoken as consonantal vowels and like other consonants were written, and that also *u* or *i* in the so-called diphthongs *au* and *ai* were represented by these letters, but that when these diphthongs were contracted to *o* or *e* respectively, the consonantal *u* or *i* could be omitted, as has happened in Phœnician; while in Hebrew they have remained as signs for the long sonant vowels *o* and *e*.

To Anglo-Indians, the most important paper in this number is a continuation of Dr. P. von

Bradke's important essays on **Ancient Indian Religion- and Language-History**. The professor takes as his text the German word *garten* 'a garden,' which he identifies with the Sanskrit *griha*, 'a house,' through the Gothic *gards* 'a house,' instead of connecting it with the Greek *χῶρος* and the Latin *hortus* as has been done by Kluge in his *Etymologisches Wörterbuch der deutschen Sprache*. This derivation necessitates the reference of *griha* to an older form **grīdha*, instead of deriving it from the root *grah* or *grabh*.

From this he leads on naturally to his next (fourth) essay—'On Sanskrit *h*, equivalent to Indo-Germanic *dh*, *bh*, and the place of the Vedic language amongst the Indo-Aryan Dialects.' The author endeavours to formulate the rule according to which a Sanskrit *h* is to be referred to an original (Indo-Germanic) *dh* or *bh*. He first gives all the instances with which he is acquainted in which this is certainly the case. I give them here in an extremely condensed form—

- (1) The suffix of the 1st pers. plu. med. *-mahē-māhi*; Greek *-μεῖα*.
- (2) The suffix of the 2 sg. imperat. act. *hi* or *dhi*; Greek *-εῖ*.
- (3) *hita* from *dhi*, beside *-dhita* (*-dhit*) as second member of a compound (*sudhita*, &c.). Cf. on the other hand *ahita*, *purōhita*, &c.
- (4) *rō'hita*, 'red,' beside *radhira*; Gr. *ἐρυθρός*.
- (5) *ruh*, *rūhati*, 'to mount,' 'to increase' = *rudh*; *rō'dhati*; Zend. *rud*, *raodheñti*, 'to increase'
- (6) *griha* = Gothic *gards*.
- (7) *grah*, *grīh* = *grabh*, *grabh*; Zend *garēv*.
- (8) *kakūha* (RV), beside *kakubh* (RV), *kakubha* (VS); Gothic *haubiþ* (?)

In only two of the above instances (Nos. 1 and 6) do both forms not occur in the oldest Indian language. Dr. von Bradke finally comes to the conclusion that from the above examples, or from those cases in which a Sanskrit *dh* or *bh* appears without a corresponding *h*, it is impossible to formulate any rule depending either upon accent or position. He next considers the following pairs of Sanskrit forms, which are most probably of Indo-Germanic origin—

- (1) *rah*—*radh*, cf. *radhū* (*radhū*; *radh*; *raodhere*).
- (2) *har*, *hau*—*dhvar*, *dheu*, cf. *druh*.
- (3) *har*—*bhar* (cf. also *dhar*).
- (4) *spah* (*sprīhayati* R V) beside *spardh* (*spardhat*).
- (5) *nah*—*nadh*.
- (6) *harsh*—*bharsh* in *bharishiti*.

down beside him in the bed. But he places a sword between her and himself, and calls her his sister and his mother, in token of his refusal of her advances. See *Pratishākh Sūtra* Vol. VIII p. 112—6. A. G.

is familiar to the students of popular folklore in Bihar. Bijai Mall's sister-in-law, in the well-known folk-song (Song of Bijai Mall, J. A. S. B. Part I. special number, 1884, p. 149), attempts to seduce him and lays herself

7) *har*, *hr̥iātē*—*bhar*, *bhr̥iātī*.

8) *har*, *haryati*—*dhār*.

9) *gūh*—*gū̐ha*, *gū̐hr̥i*, *aghukshat*, *jagukshatas* RV; Zend. *guz*; Indo-Ger. *ghugh* or *gugh*.

These also refuse to lend themselves to any general rule, and the author concludes that we must also give up this attempt to explain by any sound law the peculiar Indian forms with *h* beside old *dh*, *bh*.

If we venture on a further investigation, the point arises whether these double forms may not be explained by the influence of other Indo-Aryan dialects. He therefore proposes to himself the three following questions:—

1. Do general considerations forbid the idea of the influence of other Indo-Aryan dialects on the language of the Vedic poems, or the idea of the existence of such dialects?

2. Do we find, with reference to the phenomena which we have just been considering, clear traces of other Indo-Aryan dialects in the *Rig-Veda* as handed down to us? In other words, do we find in the *Rig-Veda*, as sporadic instances, sound-changes the same as, or analogous to, those which regularly occur in such popular Indo-Aryan dialects as we know, and which belong to a much later time?

3. Is the change of an intervocalic *dh* or *bh* to *h* one of the sound-tendencies, which are specially frequent in the later Indo-Aryan dialects?

If, says the author, we can answer the first question in the negative, and the second and third in the affirmative, we shall have some right to refer the phenomena hitherto dealt with to the influence of the oldest popular dialects.

The discussion of the answers to these questions would well deserve complete translation, but space forbids more than a close abridgment of the heads of the arguments.

With regard to the point No. 1 we must first consider if the language of the *Rig-Veda* is contemporary with or later than the entry of the Aryans into India.

The Hymns of the *Rig-Veda* are no folk songs, their language is no popular dialect. They are not in an undeveloped speech which has to struggle at every step for adequate means of expression. Nay, the greater number are in a rounded shape, and the few, often already not original, are cast in a fixed poetic mould. The oldest Indian poetry must have been left far behind before it had arrived at this stage of progress, although there are, it is true, fragments in the *Rig-Veda*, perhaps even whole poems, which may have been handed down from antiquity. The Vedic Hymns were certainly considered holy, and sanctity was ascribed to the priests, but the

people had not yet arrived at that stage when, owing to worship of ancestors, every word and syllable of half-understood songs was considered a holy thing in itself. That stage was not reached till the holy tradition began to be unintelligible and it was no longer possible to compose other hymns like those handed down, or even to alter those which were already possessed. Then only was it that the necessity of fixing the forms of the words and of sounds, became apparent, and that every letter was endowed with sanctity. Till then the oldest songs must have been handed down by word of mouth from generation to generation, and must have been altered in the process, till they were fixed for ever by the Vedic collection, just as has happened in the case of Luther's German translation of the Bible, although this has been, to a certain extent, protected from the grossest class of alterations by the fact of its being printed. It is, therefore, not the time of the beginning or of the bloom of the oldest Indian poetry, but that of its decline, which gives its characteristic colour to the collection as handed down to us.

In considering these changes, an important factor is the spoken language. So long as a literature is living, it can never entirely withdraw itself from that influence, and the ancient Rishis were the less able to protect themselves therefrom, either in the traditional rendering of old or in the composition of new hymns, because the preserving power of writing was unknown to them. We may assume that, besides the literary speech in which they sang and held mutual converse, they also spoke the local vernacular dialect. In this way it became impossible to avoid the introduction into the holy language of dialectic variations,—especially in the case of isolated forms, or of words of daily life,—and the nearer the dialect was to the literary language, the more impossible it was. If a man talked to his wife about his *griha*, or said to his daughter *cha*, 'come,' it might easily happen for him to use the same words in the 'correct' speech; and his son would not hesitate to introduce these gradually adopted forms into poetry. In fact the circumstance that we find comparatively modern forms, due to dialectic influence, in the oldest hymns, no more argues against either the ancientness of the hymns or the modernness of the forms, than the finding of modern forms in a German Bible, printed in the present century, would be considered as proof against the age of Luther's translation, or against the modernness of these forms.

If, therefore, we are entitled to assume that by the time of the collection of the hymns of the

Rig-Vêda, popular dialects had developed by the side of the Vedic literary language, there is every possibility that the former have influenced the latter.

But are we, in fact, entitled to assume the existence of Indo-Aryan popular dialects at so early a period?

If, as it has been attempted to prove above, our *Rig-Vêda* collection belongs to a late period of the oldest Indian lyric poetry, it must follow that it belongs to a period long posterior to the time when both the Aryan branches formed one people. This is borne out by other independent considerations, such as the retrogression (and, in the case of Dyaus, the disappearance of the older divinities before the newer gods. But if we may assume that, between the separation of the Aryan brotherhood and the collection of the *Rig-Vêda* hymns, a considerable period elapsed, it is *a priori* probable that during this period dialects were formed, closely related, it is true, to the literary language, but still distinct from it. From these and other reasons, the possibility of the existence of popular dialects, clearly distinct from the Vedic language, before the final editing of the *Rig-Vêda* as we have it now, must be unreservedly admitted. But only the possibility; and not till clear traces of dialectic influence are proved to exist in the *Rig-Vêda*, or till we can point out in the later Indo-Aryan dialects forms of Indo-Germanic origin which must necessarily be referred beyond the *Rig-Vêda*, shall we be in a position to consider as proved, the simultaneous existence of the Vedic language, and of other Indo-Aryan dialects. In that case we must look upon the former as a perfected literary language, and it is at least possible that it differed from the contemporary dialects not so much in its inflexions or in its vocabulary, as in its being already in a state of formalness and ossification.²

This brings us to the second question 'Do we find clear traces of other Indo-Aryan dialects in the *Rig-Vêda* as handed down to us?'³ Before answering this, it is necessary to consider generally the relationship which the middle and modern Indian dialects bear to Classical and Vedic Sanskrit. The following is a brief outline of the considerations advanced by the author:—

(1) Without doubt, Pâli stands nearer to Vedic than to Classical Sanskrit in many important points.

(2) The same appears to be the fact in regard to the middle and modern Indian dialects.

The following go to prove this:—

a) The manner in which words are dealt with

in a sentence can hardly be explained by the *sandhi* rules of Classical Sanskrit.

(b) Pâli and Prâkrit agree with Vedic Sanskrit in a whole series of sound and inflexion forms,—in which they differ from Classical Sanskrit: *e. g.* the change in Pâli of intervocalic *ḡ, dh* to *ḡ, lh*; the Aor. form *āka* = Ved. *akar*; the Infinitive *tove* beside *tum*; the nom. pl. of *a*-stems in *āsē*, compared with Vedic *āsus*; the Prâkrit Abstr. suff. *-ttana* = Ved. *-tana*.

If, moreover, we consider that Classical Sanskrit, as the language of the learned and of literature, must have continually influenced the remaining Indian dialects, and also that in these dialects forms which stand specially near classical Sanskrit, may also be loan-words from that language, then we shall be but slightly inclined to treat Classical Sanskrit as the mother of the middle and modern Indian languages. But does it therefore follow that these languages are derived from Vedic Sanskrit?

We find from the oldest literary records of the Greeks, Germans, and so forth, that in their time the languages existed each in several dialects. So, it is reasonable to suppose, was the case in India. This accounts for double forms like *ebhis* and *ais*, *āsas* and *as*, and the like. It is difficult in many cases to separate the older portions of the *Rig-Vêda* from the new; for the whole, as we have it, is presented to us in the conventionally coined speech of one special period of Indian lyric poetry. A great portion of the hymns were written already in that lyric language; and even such songs as were perhaps originally sung in purer dialect, have scarcely been able fully to escape the influence of this literary language. The language of the *Rig-Vêda* is closely approached by that of the other Vedic writings. That of the more modern Vedic writings gradually approaches that of Classical Sanskrit, in which the ancient literary speech of India has preserved to the present day its final form.

It would be no more reasonable to assume that the mediæval and modern Indian dialects are sprung from the Vedic literary language, than that the Grecian dialects are sprung from the language of Homer. It would be much more reasonable to search for the older stages of the modern Indo-Aryan dialects, in those dialects from which the Vedic literary language may have sprung. But even such an assumption is unnecessary. The probability is that the mediæval and modern dialects are sprung from other ancient dialects, and that the dialects from

² The author in a subsequent communication refers to Prof. A. Wener's *Indische Studien*, II, 119 ff., and 186ff.

³ More fully given above.

which the Vedic Literary language was developed, or at least some of them, died out at an early date.

The author next quotes Professor E. Kuhn (*Beiträge zur Pali-Grammatik*, p. 10), in support of the view above advanced. He then considers examples of Pāli, Prākṛit, and modern forms which must be referred back, not to the language of the *Rig-Veda*, but to the popular dialects which developed contemporaneously with it. Examples of this kind have been given by Kuhn, but some are doubtful. But, at any rate, the Pāli *rukṣha* appears to go back to an Indo-Germanic by-form besides the Sanskrit *vikṣha*. So also the Pāli *suṇoti*, *suṇati*, appears referable to a form *śruṇōti*, older than the Sanskrit *śṛiṇōti*.

It is well known that already in the Vedic language there are appearances which remind one of Prākṛit. A complete and systematic examination of these is desirable, but would exceed the bounds of the essay. He, therefore, proceeds only to collect a series of Vedic forms, which run contrary to the sound-tendencies, as hitherto known to us, of the language of the Hymns, and to examine whether the forms comply with the sound-tendencies of later Indo-Aryan dialects, or at least are in accordance with the general direction of these tendencies. This may enable us to answer the question now under consideration.

He begins with a few isolated forms, which appear to be loan-words in the Vedic language.

(1) In Vedic and Classical Sanskrit, *s* in certain cases becomes *sh*. In the later dialects the three sibilants of Sanskrit are treated as one,—usually the dental. Now there are Vedic forms like *ribīsa*, *būsa*, *bṛisaya*. These may be considered as loan-words from other Indo-Aryan dialects. Indeed the *s*, if it represents an Aryan *s*, and perhaps also the *b*, may point to Iranian influence. Cf. further Rig-V. *prishant*, *prishati*, besides *prīṣai*, Greek *περσος*; Ath.-V. *ruśant*, beside Rig-V. *ruśh*.

(2) Vedic and Classical Sanskrit usually preserve medial consonants, while the later Indo-Aryan dialects often drop intervocalic medial consonants; cf. *titān*, 'a sieve,' *prauya* (Rig-V.) 'a fore-yoke,' which are probably loan-words from other Indo-Aryan dialects. The former the author connects with *√tak*, and the latter he refers to **prauya*.

(3) In the later Indian dialects there is a tendency to change an intervocalic tenuis, and tenuis aspirata, into a media and media asp. respectively. Cf. Rig-V. *nīdh* in *nīdhamāna*, *nādhita*, *nādhas* with the rarer *nīth* in *nāthita*, *nātha*. In the Ath.-V. *nīth* (*nāthita*, *nātha*) is

the more common. Other documents (Vedic as well as Classical Sanskrit) appear to know only *nīth* (except perhaps in *rayinādha*). Pāli has likewise *nātha*. Prākṛit has *nādha* and *nāha*. Here it seems probable that the Pāli and Sanskrit have preserved the older form, while the Rig-V. prefers a form influenced by a popular dialect. Again, cf. Rig-V. *ārbhaya* with *arbhakī*: *√tuj*, *tujī* (RV) with *√tuch*, *tōka*, &c.; *karta* (RV, AV) with *garta* (first appearing in the *Brāhmaṇas*).

(4) In the old literary language, a dental became a cerebral only under the influence of certain special sounds. A dental explosive became cerebralized through the influence of a preceding original *sh*, **zh*, or **l*. The dental nasal was also cerebralized under the influence of a preceding *r*-sound. In the more modern dialects, the cerebralization of a dental occurs under a much wider range of circumstances. Dental explosives are cerebralized under the influence of an *r*-sound also, and even without any apparent reason, beyond the tendency of some dialects towards cerebralization. Still more prominent is the general tendency to cerebralize the dental nasal. This kind of cerebralization of a dental can in the cases of certain words be pointed out in the Rig-V. We find *kāta* (Prākṛit form of *karta*), *kaṭya*; *nāla*, cf. *nālī* (later *nala*; Pāli, *nāla*, *nālī*, *nālī*, *nālī*, beside *nada*); again *kāta* (Rig-V.); *arata* (Ath.-V.), beside *arata* (RV); *markata* (VS. TS); in all of which there is possibly a change of dental suffix *ta* to a cerebral. These changes are still more frequent in the later language; cf. *bhaṇ* beside (RV) *bhan*; *aṭ* beside (RV) *at*; *naṭ* beside *nart*, *nṛt*. The conjecture is not unreasonable that the forms in which the cerebral appears have arisen from the influence of Indo-Aryan popular dialects.

(5) The old literary language of India, the Classical as well as the Vedic Sanskrit, retained, we know, the old *r* vowel in its entirety. The remaining Indo-Aryan languages agree, on the contrary, in endeavouring to rid themselves of it, in consequence of which the *r*-sound usually entirely disappears, and another short vowel, *a*, *i*, or *u*, enters into its place. We find analogous examples in the *Rig-Veda*; e. g. *gēha* beside *gēha*; *ēdh*, *ēdhatē*, beside *ardh*, *vidh*; so also perhaps *jēh*, beside *jrambh*, *jrimbh* cf. *jrambha* and (RV) *hēsh*, to be referred to **heresh*. Here *ē* is represented by *ē*, and not by *a*, *i*, or *u*. The later dialects, however, sometimes have *ē*, thus (Pāli and Prākṛit) *geha*, beside *gha*, *ghara*, *adh* occurs in Pāli, beside *idh*, *jīhate*, *iddhi*, Prākṛit *idhi*; *hēsh* appears in Pāli and Prākṛit regularly as *hes*. If *jēh* in *Rig-Veda* is to be referred to

**jribh*, *jrimbh*. Prākṛit has preserved the fuller form *jañbh*, *jñimbh* (= *jrimbh*): cf. also Pr. *genh* = Skr. *grihnāti*, beside the Pāli *ganh*-; Pāli. *gedha*, 'greed,' 'desire,' Skr. *gardh*, *griddh* beside *gidh*, *gijjhati*, *giḍḍhin*, 'greedy' cf. *gijjha*, *gaddha*, 'vulture': in Prākṛit *veṇṭa*, *tālavanta* beside Skr. *ṛinta*, *tālavinta*, Pāli. *vanta*, *tālavanta*.

The author then proceeds to discuss the conditions of this change of *ri* to *e*, which appears to him to probably depend upon the near presence of the letter *h*. Moreover, the *e* appears to have been originally short.

He then continues, that, although some of the forms above quoted may be the subject of discussion, most of them should be accepted as loan-words into Vedic or Classical Sanskrit, taken from other Indo-Aryan dialects. There are other words also which occur in the *Rig-Vēda*, which the author enumerates, which may also be similarly explained, though without the same amount of evidence, and he finally concludes this portion of his essay by answering his second question in the affirmative.

This brings us to the third and last question, 'Is the change of an intervocalic *dh* or *bh* to *h* one of the sound-tendencies which are specially frequent in the later Indo-Aryan dialects?'

In Pāli *dh* and *bh* usually remain unchanged, though forms with *h* are not uncommon. In Prākṛit the change to *h* is much more common. In the modern dialects it is the rule. He takes the following typical cases:—

VEDIC SANSKRIT—

- (1) The case endings, *-bhis*, *-bhyas* (*-bhias*), *-bhyām* (*-bhiām*) added to a vocalic stem termination.
- (2) The words, *nabhas*, *ṛibhu*, *surabhi*, *nābhi*, *sabhā*, *ibha*, *ubha*, *abhi*, *ādhan*, *vadhā*, *śhadhi*, *adhi*, *adhas*; *adhara*, *adhama*.
- (3) The suffix *-bha*, e.g. in *ṛishabha*, *vrishabha*.

PĀLI—

- (1) *-bi*, rarely *-bhi*.
- (2) *nabha*, *surabhi*, *nābhi*, *sabhā*, *ibha*, *ubha*, *ubhaya*, *abhi*; *vadhā*, *śadhi*, *adhi*, *adho*, *adhara*, *adhama*.
- (3) *usabha*, *vasabha*.

PRĀKRIT—

- (1) *-hi*, *hiñ*.
- (2) See Hémachandra, I. 187. A., Kalpasūtra. (a) *naha* and *nabha*, *surabhi* (*hi*), *nābhi*, *sabhā*, *ibha*, *ubhas*, *ubhaya*, *abhi*; (b) *ahi*, *ahe*, *ahara*. B., Hāla, (a) *naha*, *surahi* and *surabhi*, *nāhi*, *ahaa*, *ahi*; (b) *raihā*, *osaha*, *ahi*, *ahara*. C., Sētubandha. (a) *naha*, *surahi*, *nāhi*, *sahā*, *uhua*, *ahi*; (b) *vahu*, *osahi*, *ahi*, *aho*, *ahara*.

- (3) Cf. Hém. *usaha*, *vasaha*, *risaha*, *gaddha*, *gaddaha*. A., *usabha* (*ha*), *vasabha* (*ha*). B., *usaha*, *vasaha*. C., *vasaha*.

In the forms, in which in the *Rig-Vēda* *h* = old *dh*, *bh* occurs, we find in Pāli and Pr. regularly *h*. To the forms quoted above (*-mahā*, *-mahī*; *-hi* beside *-dhi*; *hita* beside *dhā* and *-dhita*; *rōhita* beside *rudhira*; *ruh*, beside *rudh*, *virudh*; *grīha*, (Gothic) *gards*; *grah*—*grabh*; *kakaha*—*kakubh*, may now be added *nah*—*nadh*; *gih*—*gādha*; *gahana*—*gabhāra*; and (?) *jēh*—*jrimbh*. Here it is interesting to observe that in those forms in which Sanskrit has preserved the old *dh*, *bh*, the mediæval dialects often show *h*. Rarest again in Pāli, where we have *rudhira* beside *rohita*, *virāḍhanaka* beside *rāhati*; but also indeed *dahati* (*dadhāti*). In Prākṛit we find *gahira* beside *gañbhira*, *ruhira* = Skr. *rudhira*. After dealing with possible objections, the author concludes that at least it is not rash to affirm that the occurrence of *h* in the *Vēda* for an old *dh*, *bh*, is due to the influence of contemporary popular dialects. There are, however, various considerations which prevent our making any more positive statement, and these he proceeds to discuss. This portion I omit, to save space. The author can only hope that he has pointed out the direction in which the truth may be found.

This article is followed by some remarks by Professor Bühler on Dr. Böhlingk's articles on *Vasishṭha*. The paper deals with textual criticisms and with the translation of certain doubtful passages.

This is followed by a short paper by Dr. Bartholomæ on the transcription of Indo-Iranian sibilants. He argues for a systematic and uniform treatment of these letters in Sanskrit and Zend transliteration.

Dr. A. Hillebrandt discusses the translation of the eighth verse in *Rig-Vēda*, X. 18. The hitherto accepted translation has been—

- Raise thyself, O woman, to the world of life;
- Thou hast before (or by) him whose breath hath flown: Come;
- Who once clasped thine hand and wooed thee,
- The wedlock of thy spouse hast thou now accomplished.'

The author says that the only possible literal translation is—

- Raise thyself, O woman, to the world of the living,
- By a dead man liest thou here. Come hither;

'He who hath wedded thee and wooed thee,
'Here hast thou obtained the wifehood of
thy spouse' (i.e. thou hast become his
wife).

Dr. Hillebrandt maintains that the corpse referred to is not the woman's dead husband. The verse, he considers, refers to a portion of the ritual of a human sacrifice, in which a woman lays herself down by the dead man, in order to obtain symbolic fruitfulness.

Dr. A. Ludwig contributes two short papers. The first on three passages in the *Rig-Veda*.

a. *Rig-Veda* X., 38, 5, *mushkagôr baddhâh*, usually translated 'festiculis vinctus.' Dr. Ludwig shows that *mushka* must mean 'fist,' cf. the Hindi *mushkêg baddhâh*, 'to tie the hands behind the back.'

b. X., 73, 9, *payâ gôshâ ôladhâ ôshadhîshâ*. The question is, why has *ôladhâ* the *udatta*. It depends on the translation, which should be literally, 'thou gavest the milk to the cow-resembling vegetables.' In order to show the isolation rendered necessary by the metre of *adadhâ* from its object, *payâh*, and also the splitting asunder of one complete expression *gôshâ ôshadhîshâ*, the editors of the text furnished *adadhâ* with an *udatta*.

c. X., 95, 1, *hagê jâgê manasâ tishtha ghôrê*. Why has *tishtha* the *udatta*? Similarly it is explained by taking *jâgê* as I sing, with *manasâ*, and translating, "Ha! I come to recollection, stand still. O terrible one!"

The second article deals with the meanings of special Vedic words.

The Part next contains reviews of

1. *Ehrlich, Delitzsch, Prolegomena eines neuen hebräisch-aramäischen Wörterbuchs zum alten Testament.* Review by Prof. Noldeke.

2. *The Massorah compiled from manuscripts alphabetically and lexically arranged by Christian D. Ginsburg.* Review by Dr. S. Baer.

3. *Bihar Peasant Life.* Review by Dr. Pischel.

4. *Hans Schiltberger's Reisebuch.* Reviewed by Dr. F. Liebrecht.

5. *Merg, Proben der syrischen Uebersetzung im Galenus-Schreiftuber die einfachen Heilmittel.* Notes by Dr. Immanuel Low.

Prof. A. Muller forwards a communication from Dr. Vollers regarding the Catalogue of the Arabic Manuscripts at Cairo.

Dr. Roth contributes a note on the *Bibliotheca Indica*, and urges the completion of the *Sandhihi* of the Black Yajur Veda, and of the *Tadriga* *Brhadmana*.

VIKRAMA DATES IN A MANUSCRIPT OF THE MAHABHASHYA.

In an excellent Manuscript of the *Mahābhāshya*, which I obtained from Gujarāt and purchased for the Government of Bombay in 1881, the copyist has recorded the days on which he finished various portions of his work, in the following seven dates:—

(1).—On Fol. 76.—Samvat 1545 varshê Śrāvana śu. di. 16 Budhê; i.e. in the year 1545, on the 16th day of the bright half of Śrāvana on Wednesday.

(2).—On Fol. 58a.—Samvat 1545 varshê Bhādra-pada-māsê krishna-pakshê 3 tṛitīyāyām tithau Ravi-dinê; i.e. in the year 1545, in the month Bhādra-pada, in the dark half, on the 3rd, on the third lunar day, on Sunday.

(3).—On Fol. 80a.—Samvat 1545 varshê Ishê māsê sitê pakshê 10 dasamyām tithau Ravi-dinê; i.e. in the year 1545, in the month Isha (or Āsvina), in the bright half, on the 10th, on the tenth lunar day, on Sunday.

(4).—On Fol. 107b.—Samvat 1546 varshê Kārttika śu. di. 4 Budhê; i.e. in the year 1546, on the 4th day of the bright half of Kārttika, on Wednesday.

(5).—On Fol. 128a.—Samvat 1546 varshê Kārttika śu. di. 13 Śukrê; i.e. in the year 1546, on the 13th day of the bright half of Kārttika, on Friday.

(6).—On Fol. 176b.—Samvat 1546 Mārga śu. di. 12 Śukrê; i.e. the year 1546, on the 12th of the bright half of Mārgaśirsha, on Friday.

(7).—On Fol. 209b.—Samvat 1546 varshê Mārgaśirsha-māsê krishna-pakshê 8 ashtamyām Bhauma-dinê; i.e. in the year 1546, in the month Mārgaśirsha, in the dark half, on the 8th, on the eighth (lunar day), on Tuesday.

The interest of these dates lies in this, that they furnish sufficient data for calculating seven consecutive dates, given by one and the same careful writer, of which the latest date is not five months distant from the earliest, and the difficulty presented by them, and which induces me to make these dates public, is, that one of their number apparently does not work out properly, while for at least five of them the corresponding European dates may be given with absolute certainty.

A comparison of the dates (3) and (4), of which the former gives a day of the month Āsvina of the year 1545, and the latter a day of the month Kārttika of the following year 1546, shows at once that the years we are concerned with, are southern Vikrama years, beginning with the month Kārttika. And a comparison of the dates (6) and (7), of which the former gives a day of the bright half of the month Mārgaśirsha, while the

latter gives a day of the dark half of *the same* month Mārgaśīrsha, would further prove, if such proof were at all necessary, that we have to deal with a southern year, with the regular amānta arrangement of the lunar fortnights. Considering that the MS. was written in Gujarāt, this is only what we should expect.

Taking the years 1545 and 1546 as expired years, the corresponding European dates for 2, 3, 5, 6, and 7 are:—

- (2.) Sunday, September 13, A.D. 1489; the 3rd *tithi* of the dark half ended 2 h. 29 m. after mean sunrise.
- (3.) Sunday, October 4, A.D. 1489; the 10th *tithi* of the bright half ended 6 h. 46 m. after mean sunrise.
- (5.) Friday, November 6, A.D. 1489; the 13th *tithi* of the bright half ended 4 h. 53 m. after mean sunrise.
- (6.) Friday, December 4, A.D. 1489; the 12th *tithi* of the bright half ended 20 h. 45 m. after mean sunrise.
- (7.) Tuesday, December 15, A.D. 1489; the 8th *tithi* of the dark half ended 22 h. 11 m. after mean sunrise (and it commenced 1 h. 25 m. before mean sunrise).

As regards (4) I find that the 4th *tithi* of the bright half of Kārttika, or 1546 expired, ended 30 minutes *before* mean sunrise of Wednesday, October 28, A.D. 1489; but considering that the *tithi* ended so near sunrise, and that the day required *would* come, under ordinary circumstances, nine days before Friday, November 6, the day of date (5), I have no doubt that, in Gujarāt, Wednesday, October 28, A.D. 1489, *was* the 4th of the bright half of Kārttika.

But I am unable to make out how the date mentioned under (1) should have fallen on a Wednesday. For in A.D. 1489, the 16th *tithi* of the bright half of Śrāvana began 9 h. 13 m. after mean sunrise of Wednesday, August 5th, and ended 7 h. 16 m. after mean sunrise of Thursday, August 6th, and the date corresponding to Śrāvana sūdi, 19 accordingly should be Thursday, August 6th, not Wednesday, August 5th. Or can it be shown that, for any reason unknown to me, the case should have been otherwise?

F. KIELHORN.

Göttingen

AN ORIGIN FOR THE BIBLICAL NAME RHAGES.

SIR,—An interesting note on the origin of Rai—called Rhages in the Bible—will be found in the "*Burhān-i-Qiṭṭ*," printed edition of Calcutta A.D. 1818, page 118, under the word راج (Raj) and page

442 under the word راي Rafi. According to this note it appears that it is a district near Sabzwār and that a town was founded there by two brothers called Rai and Rāj, and that when completed they quarrelled as to which of them should give the place his name. Finally it was decided that the place should be called Rai after one brother and its people Rāji after the other.

Tehran.

S. J. A. CHURCHILL.

SIR,—In page 370, Vol. II. of the *Indian Antiquary* (December, 1873), I find that a correspondent, Pūṇa Nāy Ghosal, in attempting to prove that Calcutta is a place known from remote antiquity, and that the modern name is a corruption of "Kalik-betra," quotes the following in a footnote, without citing his authority:—

"*Dakṣiṇāśār māraṅga gubāḥa Bahola pūrve Kalik-betram beejanvath.*" &c.

Will any of your numerous readers and correspondents give the full text and correct reading of the quotation, and the name of the *purāṇa* or other book from whence it is taken?

NILCĀWAL BASAK

16, Chunderpally Street Calcutta.

MAKHZAN UL ADVIYEH.

SIR,—General Houtum-Schindler in his note on the *Agāḥi ante*, p. 143, mentions the medical dictionary called Makhzan-ul-advīyeh the author of which is Mir Muhammed Husain Khan ul-'Aqil ul-'Alavi son of Hakim Muhammad Hādi Khan ul-'Aqil ul-Khorāsāni, residing at Shirāz. Muhammed Husain Khān, apparently, wrote the portion treating of simple medicaments himself. He first, in A.H. 1183 commenced the work in Arabic, but certain obstacles to its completion arising in A.H. 1185, at the request of his master, Mir Muhammed 'Alī ul-Husain, he began the present work in Persian. The first volume, on simples, is divided into a *māqaddimah* of 11 *fāṣl*s and the subject matter in alphabetical order, followed by a *khāṭimah* containing a glossary of the technical terms. According to *fāṣl* 11 of the introduction to this volume, Muhammad Hādi Khān would appear to be the author's grandfather, and his father would appear to be Hakim Mir Muhammed Hāshim styled Mo'atamed ul-Muluk 'Alavi Khān; although it may more probably be that Muhammed Husain Khān is the son of Muhammad Hādi Khān whose father is Muhammed Hāshim Khān, whose father may possibly also have been called Muhammed Hādi Khān. This volume has been lithographed by itself at Bombay A.H. 1273.

Muhammed Husain Khan, at the request of his master, the same Mir Muhammed 'Alī, collected the notes of his grandfather, Mir Muhammed

Hâshim styled Mo'atamed ul-Mulûk, on compound medicaments and compiled a *qarâbâdîn*, called: *مجموع القواعد ودخائر الغرائب* divided into a *muqaddimeh* subdivided into 20 *fusls*, and the dictionary of compound drugs in alphabetical order in twenty-eight *kitâbs*, or books.

The *Makhzan-ul-Adviyeh* and the *Qarâbâdîn*, the two volumes in one, were lithographed at Teheran in 1277 A.H. The *Qarâbâdîn* has been twice printed in India (Calcutta ?) A.H. 1248-49 and 1254-55

S. J. A. C.

NOTES AND QUERIES.

SUPERSTITION AS TO CIRCUMCISION AMONGST THE MALAYS.

Among the Malays, if an uncircumcised boy is eating with a party of men and the gizzard of a fowl, in some dish or other, falls to his share,

it will at once give rise to remark. He will be told not to eat it lest his skin should be tough and he be caused extra suffering when he submits to the rite of circumcision

W. E. M.

BOOK NOTICE.

GENERAL INDEX TO THE REPORTS OF THE ARCHÆOLOGICAL SURVEY OF INDIA, VOLS. I. TO XXIII. by V. A. SMITH, B.C.S. Printed by the Superintendent of Government Printing, India. Calcutta. 1887. Royal 8vo; pp. xviii., 216.

We regret that we have not been able to notice before now Mr. V. A. Smith's most valuable addition to the Reports of the Archæological Survey of India, in the shape of a General Index to Vols. I. to XXIII.,—the whole series of Reports issued by, or under the direction of, General Sir A. Cunningham,—with a Glossary and General Table of Contents.

As remarked by the Compiler of this Index in his Preface, everyone who has had occasion to consult the Reports in question must have felt the want of a General Index, such as has now been made available. "The Reports contain a vast mass of valuable information, but it is presented in such an undigested form that much of it is practically inaccessible. Each volume is certainly provided with an Index, but these Indices are, with two exceptions, extremely meagre, and of very little service." Under these circumstances the present Index was undertaken, with Gen. Sir A. Cunningham's approval. And we find every reason for congratulating Mr. V. A. Smith on the results of his work, which will greatly enhance the utility and value of the series of Reports.

The Index does not aim at giving a reference for every proper name mentioned in the Reports, or for every topic discussed in them. For instance, Mr. V. A. Smith has very wisely passed over, with but very little notice, "the crude and unscientific speculations of General Cunningham's assistants, which waste so much space in several volumes of the Reports," and which

ought, in fact, never to have been allowed to appear in print at all. But, excluding matter of this kind, and bearing in mind that the large number of reports to be indexed in a single volume rendered it necessary to avoid many minor entries, such as subordinate and almost unknown dynastic names which must be traced by referring to the dynasties concerned, the Index appears to render easy for the first time a reference to nearly everything in these Reports that is worth turning up. And by no means the least important feature in it, is, that, with the help of maps and gazetteers, the Compiler has remedied in almost every instance what was a most serious and inconvenient defect in the Reports themselves, *viz.*, the omission to give full and definite details, by reference to districts, sub-divisions, &c., as to the exact localities at which epigraphical, architectural, and other remains are to be found, if still *in situ*, or as to the exact places at which such remains, and especially coins, were originally found, though, having been since removed into public and private collections, they are not now to be looked for there.

The short Glossary, at the end of the book, is intended to explain Oriental words, used in the Reports, for the benefit of readers who have not resided in India, and to whom therefore they would ordinarily be unintelligible; and, as far as it goes, it is a serviceable addition.

One of the most useful parts of the book is the General Table of Contents, pp. vii. to xviii., which reproduces, with some additions, the Table of Contents of each separate volume, and thus shows almost at a glance where we have to look for the detailed accounts of the various places described in each Reports.

THE USE OF THE TWELVE-YEAR CYCLE OF JUPITER IN RECORDS OF THE EARLY GUPTA PERIOD.

BY J. F. FLEET, B.O.C.S., M.R.A.S., C.I.E.

IN the determination of A.D. 319-20 as the epoch, and A.D. 320-21 as the commencement or first current year, of the so-called Gupta era, one of the most interesting and important subjects of inquiry is the use of the Twelve-Year Cycle of Jupiter in the dates of some of the records of the Early Gupta period.

These dates are found in the inscriptions of the *Parivrajaka Mahārājas Hastin and Samkshōbha*, *Corp. Inscr. Indic.* Vol. III. "The Gupta Inscriptions," No. 21, page 93. to No. 25, page 112. And the extreme value of the records, from the present point of view, is due to the fact that in each instance, except in the *Bhumarā* pillar inscription,¹ No. 24, page 110, the date is directly connected with an expression which shews explicitly that, at the time mentioned, the Gupta sovereignty was still enduring; and, consequently,—since the figures of the years are naturally referable to the same uniform series with the years quoted in the records of the Early Guptas themselves; and since the palæography of the inscriptions is entirely in favour of such a reference,—which shews also that the dates are recorded in the identical era that was used by the Early Gupta kings.

In connection specially with the epochs of A.D. 165-67 proposed by Gen. Sir A. Cunningham, and of A.D. 190-91 proposed by Sir E. Clive Bayley, the evidence derivable from these records has hitherto been completely misapplied: in consequence of the adoption of the view that the duration of any *saṃvatsara* or year of this cycle, is the same with that of the years of the Saka era, from Chaitra Śukla 1 to the *pūrṇimānta* Chaitra

krishṇa 15; and that the means of exactly determining the *saṃvatsaras* of this cycle are provided by the last remainder obtained from certain rules given by Varahamihira and others, which in reality only shews what *saṃvatsara* of the Sixty-Year Cycle of the same planet according to the so-called northern system, and of the Twelve-Year Cycle according to the mean-sign system, is current at the commencement of any given Saka or Kalyuga year, and which does not provide for the determination of the *saṃvatsaras* on any other given date in the year.²

The correct theory of the cycle, according to the requirements of the heliacal-rising system actually applied in the records now under consideration, with the proper method of determining each of the *saṃvatsaras*, has now been demonstrated by Mr. Sh. B. Dikshit, in his paper which is published at pages 1ff. and 312ff. above. And, by calculations based on the *Sūrya-Siddhānta*, he has worked out all the results required for a full treatment of the dates in question: giving the full English and Hindu dates throughout, in order that both European and Hindu astronomers may be in a position to easily check his results. In publishing his results, I am confident that no essential errors can be established in them, even though it should be shewn, by more exhaustive calculations, that his longitudes for the heliacal risings of Jupiter are capable of slight corrections.³ And, as will be seen, his results shew that, with the epoch of A.D. 319-20, with the running difference of two hundred and forty-two years between current Gupta and current Saka years, and with the treatment of the Gupta

¹ This inscription is a joint record of the *Parivrajaka Mahārāja* Hastin, and of the *Mahārāja* Śarvanatha of Uchchakalpa, defining one point of the boundary between their territories. And the understanding that, while the *Parivrajaka Mahārāja* were feudatories of later members of the Early Gupta dynasty, the *Mahārājas* of Uchchakalpa, whose territories evidently lay more to the east and south-east, were feudatories of early kings of the dynasty which eventually came to be known as the Kalachuri dynasty of the Chedi country in Central India, would explain at once why no era is quoted in this record, the reason being that the feudatories of the two rival dynasties could not agree as to which of the two rival eras,—the Gupta era, and

the Kalachuri or Chedi era,—should be used. For further remarks on this point, see *Corp. Inscr. Indic.* Vol. III. introd. p. 8 ff.

² See, for instance, *Indian Eras*, p. 26 ff.—This interpretation of the rules in question leaves unutilized, and unexplained, the first remainder obtained from the division by 3750 according to Varahamihira's rule, and by 1875 according to the rule of the *Jatishikha*. In connection with the *Jatishikha* rule, however, Warren has shewn (*Kalāraśikha*, p. 202) how this remainder gives the means of determining the actual commencement of each *saṃvatsara*.

³ See, e.g. note 11 below.

year as a northern Śaka year commencing with Chaitra Śukla 1. in each instance, by the heliacal-rising system, the given saṃvat-sara actually was current on the given date.

That the other system of the Twelve-Year Cycle, the mean-sign system, according to which the *saṃvat-saras* are determined by the passage of Jupiter from one sign of the zodiac into another, does not apply to the dates in these records, with the epoch of A.D. 319-20, is shewn by the fact, as will be seen from the details for this system given below, that it gives correct results in only two cases out of the four by which any absolute proof can be established: *viz.* in the case of the grant B. dated in Gupta-Saṃvat 163, and in the case of the grant C. dated in Gupta-Saṃvat 191.

For the proof that Gen. Sir A. Cunningham's and Sir E. Clive Bayley's proposed epochs cannot be supported, either by the heliacal-rising system, or by the mean-sign system, which is the one that they sought to apply in support of their theories, I must refer to the fuller treatment of these dates in *Corp. Ins. Ind. Vol. III. Introduction*, page 161ff. The object of the present paper is only to shew how successfully the heliacal-rising system works out for these dates with the epoch of A.D. 319-20; and that the mean-sign system does not apply.

* The date in the Bhumara pillar inscription, E below, furnishes no definite proof in itself, because the current Gupta year is not mentioned in it, and consequently the given *saṃvat-sara* could be proved equally well for epochs differing by a year or more, on either side, from the exact epochs that are being considered. We can only test it, in so far as to see whether, under any particular circumstances, the system fails, through an omission of the given *saṃvat-sara*.

† See page 219f above.

‡ Here, and throughout, the year is treated as a northern year. But the details of these dates do not furnish any actual proof as to the *parāramita* or *amānta* arrangement of the lunar fortnights.

§ Throughout his heliacal rising. But the actual calculation is for his first daily rising after his becoming capable of rising heliacally.

¶ It must be borne in mind that the Hindu *tithi* is coupled with the week-day on which it ends, after sunrise; and that the Hindu week-day is reckoned, with the civil day and night, from sunrise to sunrise, but the English week-day, and the civil date, coupled with it, from midnight to midnight. In comparing Hindu and English dates, the only course is to take mean sunrise and mean midnight 0.0 a.m. and 12.0 p.m. respectively, and to give, as the English equivalent, that week-day, with its civil date, which is actually running during these eighteen hours, when of course the same week-day is running in India; *viz.* the week-day which is identical for the greater part by both the English and the Hindu reckonings. And, if the difference in mean time between Greenwich and Ujjain, *viz.* 5 hours 2 minutes, 52 seconds (using the same longi-

A.—The Khôh Grant of the year 156.

The first inscription is one of the Khôh grants of the Mahārāja Hastin, *Corp. Ins. Ind. Vol. III. No. 21*, page 93; in which the date (line 1ff.) is—*śatpañchās-ōttarē=bda-satē Gupta-nīpa-rajya-bhuktāu Mahā-Vaiśākha-saṃvatsarē Kārttika-mā-a-śukla-paksha-tritīyā-yām*,—"in a century of years increased by the fifty-sixth (*yeṭr*); in the enjoyment of sovereignty by the Gupta kings: in the Mahā-Vaiśākha *saṃvatsara*; on the third lunar day of the bright fortnight of the month Kārttika."

This gives us, for calculation, the Mahā-Vaiśākha *saṃvatsara*, as current on the third *tithi* or lunar day of the bright fortnight of the month Kārttika (October-November) in Gupta-Saṃvat 156 current. And, on the analogy of the Verāwal inscription* of Valabhī-Saṃvat 945, this should be the case in Gupta-Saṃvat 156 + 242 = Saka-Saṃvat 398 current:† in which year the given *tithi* corresponds to Sunday, the 19th October, A.D. 475.

Mr. Sh. B. Dikshit finds (see the accompanying Table. Col. A) that Jupiter's rising,‡ next before the given date, took place on Kārttika Śukla 1 of the same year, Saka-Saṃvat 398 current, corresponding to Friday, the 17th October, A.D. 475; or, by the English calendar, on Saturday, the 18th October.§ His longitude then was 195° 24'. By both the systems of unequal spaces for the longitudes

tude for Ujjain, 75° 43', taken from Keith Johnston's Atlas, that is used by Mr. Sh. B. Dikshit for his calculations and for the *Sigama-Panchāṅga* be taken into consideration, of course the week-days of the two places are absolutely identical except for the space of 57 minutes 8 seconds, or 2 *ghaṭas* 22 8 *palas*, at the end of the Hindu week-day; during that time, while at Ujjain a Hindu Thursday, for instance, is still running, at Greenwich the week-day will be Friday. Owing to this there may sometimes be a nominal discrepancy in the resulting English week-day for a given *tithi*; but the instances will be few and far between, as very few *tithis* will be found to end so late after sunrise, and the discrepancy will be confined mostly to such occurrences as the rising of Jupiter. —Jupiter's daily rising, next after his becoming capable of rising heliacally, takes place about forty-four minutes before sunrise, and therefore in the period during which the Hindu and the English week-days are not identical. In the present case it took place at the time in question before sunrise on the English Saturday, the 18th October. Kārttika Śukla 2 did not end till after sunrise on that day. Consequently, as current *tithis* are not quoted, unless under certain very exceptional conditions not applicable to such occurrences as this, the *tithi* on which he rose was Kārttika Śukla 1. And this *tithi*, ending after sunrise on the Friday and before sunrise on the Saturday, has to be coupled with Friday, the 17th October, as its week-day. Hence the apparent, but not actual, difference of a day, according as we take the Hindu or the English calendar. And a similar difference runs through all the dates of the heliacal risings given below.

Samvatsaras of the Twelve-Year Cycle of Jupiter.

| | A | B | C | D | E 1 | E 2 |
|--|---------------------|------------------|----------------------|------------------|--------------------|---------------------|
| Gupta year, current..... | 156 | 163 | 191 | 209 | 189 | 201 |
| Add the difference of..... | 242 | 242 | 242 | 242 | 242 | 242 |
| Saka year, current..... | 398 | 405 | 433 | 451 | 431 | 443 |
| The given samvat sara | Mahā-Vaiśākha | Mahā-Āśvayuja | Mahā-Chaitra | Mahā-Āśvayuja | Mahā-Māgha | Mahā-Māgha |
| The given date | Kārttika śukla 3 | Chaitra śukla 2 | Māgha kṛṣṇa 3 | Chaitra śukla 13 | Kārttika, 19th day | Kārttika, 19th day |
| Corresponding to | 19th October, A.D. | 7th March, A.D. | 3rd January, A.D. | 19th March, A.D. | 13th October, A.D. | 2nd October, A.D. |
| | 475 | 482 | 511 | 528 | 508 | 520 |
| Jupiter's preceding rising was on..... | Kārttika śukla 1 | Vaiśākha kṛṣṇa 6 | Āśvina śukla 11 | Chaitra śukla 12 | Śrāvaṇa śukla 15 | Bhādrapada śukla 3 |
| corresponding to | 17th October, A.D. | 5th April, A.D. | 29th September, A.D. | 18th March, A.D. | 28th July, A.D. | 2nd August, A.D. |
| English date | 475 | 481 | A.D. 510 | 528 | 508 | 520 |
| Longitude then was | 18th October | 6th April | 30th September | 19th March | 29th July | 3rd August |
| " position was in | 195° 24' | 4° 21' | 177° 47' | 347° 45' | 117° 4' | 121° 30' |
| And the samvatsara, which then began, was..... | Vaiśākha | Āśvini | Chitrā | Rōvātī | Maghā | Maghā |
| | Mahā-Vaiśākha | Mahā-Āśvayuja | Mahā-Chaitra | Mahā-Āśvayuja | Mahā-Māgha | Mahā-Māgha |
| Jupiter's following rising was on..... | Mārgaśīrṣa śukla 13 | Jyēṣṭha śukla 8 | Mārgaśīrṣa kṛṣṇa 7 | Jyēṣṭha śukla 3 | Āśvina kṛṣṇa 13 | Āśvina kṛṣṇa 1 |
| corresponding to | 15th November, A.D. | 12th May, A.D. | 29th October, A.D. | 26th April, A.D. | 29th August, A.D. | 3rd September, A.D. |
| English date | 476 | 482 | 511 | 529 | 509 | D. 521 |
| Longitude then was | 16th November | 13th May | 30th October | 27th April | 30th August | 4th September |
| " position was in | 225° 35' | 40° 34' | 207° 41' | 24° 36' | 147° 49' | 152° 17' |
| And the samvatsara, which then began, was..... | Jyēṣṭha | Rōhini | Viśākha | Kṛittikā | Uttarā-Phalgunī | Uttarā-Phalgunī |
| | Mahā-Jyēṣṭha | Mahā-Kārttika | Mahā-Vaiśākha | Mahā-Kārttika | Mahā-Phālguna | Mahā-Phālguna |

of the ending-points of the *nakshatras* (see page 3 above, Table II.), he was then in Viśākhā; and the *saṃvatsara* which then began (see page 3 above, Table I.), must have been named **Mahā-Vaiśākha**.⁹ Jupiter's next following rising took place on Mārgaśīrṣa śukla 13 of Śaka-Saṃvat 399, corresponding to Monday, the 15th November, A.D. 476; or, by the English calendar, on Tuesday, the 16th November. His longitude then was $225^{\circ} 35'$. By the Brahma-Siddhānta system of unequal spaces, he was then in Jyēsthā; and the *saṃvatsara* which then began, must have been named Mahā-Jyēsthā. While, by the Garga system of unequal spaces, he was then in Anurādhā; and the *saṃvatsara* which then began, must have again been named Mahā-Vaiśākha; which shews that, by this system, there was at this period a repetition of a *saṃvatsara*. This difference as to the following *saṃvatsara*, however, does not affect the given date. By both the systems of unequal spaces, with the running difference of two hundred and forty-two years between current Gupta and current Śaka years, **the Mahā-Vaiśākha saṃvatsara was current on the given date.** And the result gives Śaka-Saṃvat 398 current (A.D. 475-76), as the equivalent of the given current Gupta year.

In connection with the results for this record, the following two points may be noted here. In the first place, Mr. Sh. B. Dikṣit has described three systems of fixing the ending-points of the *nakshatras*; one of equal spaces, and two of unequal spaces. An examination of Jupiter's longitudes, as given in the accompanying Table, for each rising next before the given dates, will shew that, in all the remaining instances, the current *saṃvatsara* is proved by all three systems; the only variation is that, in the case of E 1, Jupiter's position, at his rising next before the given date, was, by the system of equal spaces, in Āślēṣhā; but, even then, the current *saṃvatsara* would be named Mahā-Māgha, as also by the two systems of unequal spaces. So, also, it may be seen that,

by all three systems, we have almost the same results in respect of the following *saṃvatsaras*; the only variation is that, in the case of D., Jupiter's position, at his rising next after the given date, was by the system of equal spaces in Bharanī, and, accordingly, the *saṃvatsara* which then began, would again be named Mahā-Āśvayuja; which shews that, by this system, there was a repetition of a *saṃvatsara* at this period; but this does not affect the *saṃvatsara* current on the given date. So far, therefore, as those dates are concerned, the correctness of the records might be proved by any of the three systems. The same, however, is not the case in respect of the present record. By the system of equal spaces, Jupiter's position, at his rising next before the given date, was in Svāti; the *saṃvatsara* which then began would be named Mahā-Chaitra; and the Mahā-Vaiśākha *saṃvatsara* would not begin till Jupiter's rising next after the given date, when, by the same system, his position was in Anurādhā. Accordingly, the system of equal spaces could be applied to the present record, only with a running difference of two hundred and forty-three years between current Gupta and current Śaka years; which would be in contradiction with the fact that, to prove the *saṃvatsaras* of all the remaining records, it must be applied with the running difference of two hundred and forty-two years. It is evident, therefore, that, in dealing with these records, the system of equal spaces is not the correct one; and that **we have to apply one or other of the systems of unequal spaces.** This, however, is only natural; for they are both more ancient than the system of equal spaces; and, the older the system, the greater the certainty that it is the one in use in the Early Gupta period. Also, the Dēōgadh inscription of king Bhōjadēva of Kanaṃj, dated Śaka-Saṃvat 784, indicates very plainly that one or other of the systems of unequal spaces, if not both of them, continued in use, in what had formed a part of the Early Gupta territory, down to at least the last half of the ninth century A.D.¹⁰ Of the

⁹ I have not been able to obtain the original authority for the use of the prefix *mahā* (*mahat*), 'great'. And it does not occur in connection with the two *saṃvatsaras* mentioned in the Hādi-grants of the Kadamba chieftain Mṛgēśavarman, viz. the Pausha *saṃvatsara* in line 8 of the grant dated in his third year (*ante*, Vol. VII, p. 55), and the Vaiśākha *saṃvatsara* in line 10 of the grant dated in his eighth year (*ante*, Vol. VI, p. 24). I use the

prefix, however, throughout, in accordance with the custom of the original records now under examination.—It occurs to me, as just possible, that the use of the prefix belongs specially to the helical-rising system, and that the absence of it denotes the application of the mean-sign system.

¹⁰ See page 23 f. above.

two systems of unequal spaces, whether we are to apply the Brahma-Siddhanta system, or the still more ancient Garga system, cannot at present be decided: since the only variation between them is in respect of the *saṃvatsara* following the *saṃvatsara* which was current on the given date of the present record.

The other point is, that, as the following *saṃvatsara* did not commence till Mārgaśīrṣa śukla 13 of Saka-Saṃvat 399, the Mahā-Vaiśākha *saṃvatsara* was still current on the given date, Karttika śukla 3, in Saka-Saṃvat 399, as well as in 398, which is the real equivalent for the Gupta year. So, also, it will be seen that, in the case of D, the Mahā-Āśvayuja *saṃvatsara* was still current on the given date, Chaitra śukla 13, in Saka-Saṃvat 452, as well as in 451, which is the true equivalent for the Gupta year of that record. Consequently, these two dates, A. and D., might be used to support a running difference of two hundred and forty-three years between current Gupta and current Saka years, as well as the true running difference of two hundred and forty-two years. But, apart from the fact that we have not obtained anything else to support such a result, there is no such alternative in respect of B. and C.; the *saṃvatsaras* of these records are proved only with the running difference of two hundred and forty-two years. All the four cases together, therefore, not only answer to, but also prove the running difference of two hundred and forty-two years between current Gupta and current Saka years.

By the mean-sign system, the Mahā-Vaiśākha *saṃvatsara* did not commence till Vaiśākha śukla 5 of Saka-Saṃvat 399 current, corresponding to Wednesday, the 14th April, A.D. 476; and consequently it was not current on the given date. The *saṃvatsara* then current was Mahā-Chaitra, which commenced on Jyēṣṭha kṛṣṇa 13 of Saka-Saṃvat 398, corresponding to Saturday, the 19th April, A.D. 475.

B.—The Khôh Grant of the year 163.

The next inscription is the other Khôh

grant of the Mahārāja Hastin, *Corp. Ins. r. Indic*, Vol. III. No. 22, page 100, in which the date (line 1 f.) is — tri-śaṣṭy-uttarāṇḍa-śatē Gupta-ni-pa-rājya-bhuktan Mah-Āśvayuja-saṃvatsarē Chaitra-māsū-śukla-pakṣa-dvitiyāyam.—“in a century of years, increased by sixty-three, in the enjoyment of sovereignty by the Gupta kings: in the Mahā-Āśvayuja *saṃvatsara*; on the second lunar day of the bright fortnight of the month Chaitra.”

This gives us, for calculation, the Mahā-Āśvayuja *saṃvatsara*, as current on the second $\frac{1}{2}$ or lunar day of the bright fortnight of the month Chaitra (March-April) in Gupta-Saṃvat 163 current. And, on the analogy of the Veraval inscription of Valabhī-Saṃvat 245, this should be the case in Gupta-Saṃvat 163 + 242 = Saka-Saṃvat 405 current, in which year the given *tr* corresponds to Sunday, the 7th March, A.D. 482.

Mr. Sh. B. Dikshit finds (see the Table, Col. B.) that Jupiter's rising, next before the given date, took place¹¹ on Vaiśākha kṛṣṇa 6 of the preceding year, Saka-Saṃvat 404 current, corresponding to Sunday, the 5th April, A.D. 481, or, by the English calendar, on Monday, the 6th April. His longitude then was $4^{\circ} 21'$. By both the systems of unequal spaces,¹² he was then in Āśvini; and the *saṃvatsara* which then began, must have been named Mahā-Āśvayuja. Jupiter's next following rising took place on Jyēṣṭha śukla 8 of Saka-Saṃvat 405, corresponding to Wednesday, the 12th May, A.D. 482; or, by the English calendar, on Thursday, the 13th May. His longitude then was $4^{\circ} 34'$. By both the systems of unequal spaces, he was then in Rōhini; and the *saṃvatsara* which then began, must have been named Mahā-Kartika. Therefore, by both the systems of unequal spaces, with the running difference of two hundred and forty-two years between current Gupta and current Saka years, the Mahā-Āśvayuja *saṃvatsara* was current on the given date. And the result gives Saka-Saṃvat 405 current (A.D. 482-83), as the equivalent of the given current Gupta year.

¹¹ These calculations are not absolutely accurate; but the margin is so wide that there is no necessity for exact precision in this case. It there should be any difference at all between Jupiter's longitudes as found by Mr. Sh. B. Dikshit, and as capable of being determined with exact precision, it will amount only to a few minutes of arc; and the actual risings of Jupiter could

differ from what he gives only by one or two days, with the result that Jupiter may have risen, in this instance, on Vaiśākha kṛṣṇa 5 or 7.

¹² Also by the system of equal spaces; but see the remarks under A. above. This point need not be noted in the following instances.

In this instance, the given *saṃvatsara* was not current on the given date in either the preceding year, Śaka-Saṃvat 404, or the following year, Śaka-Saṃvat 406. The result, therefore, not only answers to, but also **proves the running difference of two hundred and forty-two years between current Gupta and current Śaka years.**

By the mean-sign system, the Mahā-Āsvayuja *saṃvatsara* commenced on Chaitra śukla 8 of Śaka-Saṃvat 404 current, corresponding to Tuesday, the 24th March, A.D. 481; and it was followed by Maha-Karttika on Chaitra śukla 15 of Śaka-Saṃvat 405, corresponding to Saturday, the 20th March, A.D. 482. Accordingly, by this system also the Mahā-Āsvayuja *saṃvatsara* was current on the given date.

C.—The Majhgawāṃ Grant of the year 191.

The next inscription is the **Majhgawāṃ grant of the Mahārāja Hastin**, *Corp. Inser. Indic.* Vol. III. No. 23, page 106, in which the date (line 1 ff.) is — *eka-navaty-uttarē=bdā-śatē Gupta-nripa-rājya-bhuktan śrīmatī pravardhamāna-Mahā-Chaitra-saṃvat-sarē Māgha-māsa-bhūta-pakṣa-tritīyāyam*,—"in a century of years increased by ninety-one; in the enjoyment of sovereignty by the Gupta kings; in the prosperous augmenting Mahā-Chaitra *saṃvatsara*: on the third lunar day of the dark fortnight of the month Māgha." And at the end, in line 21, the date is repeated as — *Magha di 3*—"the month) Māgha, the (civil) day 3."

This gives us, for calculation, the Mahā-Chaitra *saṃvatsara*, as current on the third lunar day of the dark fortnight of the month Māgha (January-February) in Gupta-Saṃvat 191 current. And, on the analogy of the Veraval inscription of Valabhī-Saṃvat 945, this should be the case in Gupta-Saṃvat 191 + 242 = Śaka-Saṃvat 433 current; in which year the given date corresponds to Monday, the 3d January, A.D. 511.

Mr. Sh. B. Dikshit finds (see the Table, Col. C.) that Jupiter's rising, next before the given date, took place on Āsvina śukla 11 of the same year, Śaka-Saṃvat 433, corresponding to Wednesday, the 29th September, A.D. 510, or, by the English calendar, on Thursday, the 30th September. His longitude then was $177^{\circ} 47'$. By both the systems of unequal spaces,

he was then in Chitrā; and the *saṃvatsara* which then began, must have been named **Mahā-Chaitra**. Jupiter's next following rising took place on Mārgaśīrṣa kṛishṇa 7 of Śaka-Saṃvat 434, corresponding to Saturday, the 29th October, A.D. 511; or, by the English calendar, on Sunday, the 30th October. His longitude then was $207^{\circ} 41'$. By both the systems of unequal spaces, he was then in Viśakhā; and the *saṃvatsara* which then began, must have been named Mahā-Vaiśākha. Therefore, by both the systems of unequal spaces, with the running difference of two hundred and forty-two years between current Gupta and current Śaka years, **the Mahā-Chaitra *saṃvatsara* was current on the given date.** And the result gives Śaka-Saṃvat 433 current (A.D. 510-11), as the equivalent of the given current Gupta year.

In this instance, again, as in B above, the given *saṃvatsara* was not current on the given date in either the preceding year, Śaka-Saṃvat 432, or the following year, Śaka-Saṃvat 434. Here again, therefore, the result not only answers to, but also **proves the running difference of two hundred and forty-two years between current Gupta and current Śaka years.**

By the mean-sign system, the Mahā-Chaitra *saṃvatsara* commenced on Mārgaśīrṣa śukla 1 of Śaka-Saṃvat 433 current, corresponding to Thursday, the 18th November, A.D. 510; and it was followed by Mahā-Vaiśākha on Mārgaśīrṣa śukla 8 of Śaka-Saṃvat 434, corresponding to Monday, the 14th November, A.D. 511. Accordingly, by this system also the Mahā-Chaitra *saṃvatsara* was current on the given date.

D. - The Khôh grant of the year 209.

The next inscription is the **Khôh grant of the Mahārāja Saṃkshôbha**, *Corp. Inser. Indic.* Vol. III. No. 25, page 112, in which the date (line 1 ff.) is — *nav-ôttarē=bdā-śata-dvayē Gupta-nripa-rājya bhuktan śrīmatī pravardhamāna-vijaya-rājyē Mah-Āsvayuja-saṃvatsarē Chaitra-māsa-śukla-pakṣa-trayôdāśyam*,—"in two centuries of years increased by nine; in the enjoyment of sovereignty by the Gupta kings; in the glorious augmenting and victorious reign; in the Mahā-Āsvayuja *saṃvatsara*, on the thirteenth lunar day of the bright

fortnight of the month Chaitra." And at the end, in line 24, the date is repeated as — Chaitra di 20 7—" (the month) Chaitra, the (civil) day 20 (*and*) 7."

This gives us, for calculation, the **Mahā-Āsvayuja saṁvatsara**, as current on the thirtieth *tithi* or lunar day of the bright fortnight of Chaitra (March-April) in Gupta-Saṁvat 209 current. And, on the analogy of the Verāwal inscription of Valabhi-Saṁvat 945, this should be the case in Gupta-Saṁvat $209 + 242 =$ Śaka-Saṁvat 451 current; in which year the given *tithi* corresponds to Sunday, the 19th March. A.D. 528.

Mr. Sh. B. Dikshit finds (see the Table. Col. D.) that Jupiter's rising, next before the given date, took place on Chaitra śukla 12 of the same year, Śaka-Saṁvat 451, corresponding to Saturday, the 18th March, A.D. 528; or, by the English calendar, on Sunday, the 19th March; *i.e.* at the dawn immediately before the making of the grant.¹⁷ His longitude then was $347^{\circ} 45'$. By both the systems of unequal spaces, he was then in Rēvatī; and the *saṁvatsara* which then began, must have been named **Mahā-Āsvayuja**. Jupiter's next following rising took place on Jyēṣṭha śukla 3 of Śaka-Saṁvat 452, corresponding to Thursday, the 26th April, A.D. 529; or, by the English calendar, on Friday, the 27th April. His longitude then was $24^{\circ} 35'$. By both the systems of unequal spaces, he was then in Kṛttikā; and the *saṁvatsara* which then began, must have been named Mahā-Kārttika. Therefore, by both the systems of unequal spaces, with the running difference of two hundred and forty-two years between current Gupta and current Śaka years, **the Mahā-Āsvayuja saṁvatsara was current on the given date.** And the result gives Śaka-Saṁvat 451 current (A.D. 528-29), as the equivalent of the given current Gupta year.

As a matter of fact, the Mahā-Āsvayuja *saṁvatsara* was still current on the given date, Chaitra śukla 13, in the following year, Śaka-Saṁvat 452; as well as in Śaka-Saṁvat 451, which is the real equivalent for the given Gupta year. Consequently, this record might be used to support a running difference of two hundred and forty-three years between current

Gupta and current Śaka years, as well as the true running difference of two hundred and forty-two years. But this possibility has been disposed of in my remarks on the date of A. above.

By the mean-sign system, the Mahā-Āsvayuja *saṁvatsara* did not commence till Āśvina śukla 3 of Śaka-Saṁvat 451 current, corresponding to Saturday, the 2nd September, A.D. 528; and consequently it was not current on the given date. The *saṁvatsara* then current was Mahā-Bhādrapada, which commenced on Bhādrapada kṛṣṇa 11 of Śaka-Saṁvat 450, corresponding to Tuesday, the 7th September, A.D. 527.

E.—The Bhumarā Pillar Inscription.

The last inscription of this series is the **Bhumarā pillar inscription of the Mahārājas Hastin and Sarvanātha**. *Corp. Inscr. Ind.* Vol. III No. 24, page 110; in which the date (line 7 ff.) is — Mahā-Maghē saṁvatsarē Kārttika-masa divasa 10 9,—“ in the Mahā-Māgha *saṁvatsara*; the month Kārttika; the (civil) day 10 (*and*) 9.”

This gives us, for calculation, the **Mahā-Māgha-saṁvatsara**, as current on the nineteenth civil day of the month Kārttika (October-November); but the current year of the Gupta era is not given. The only guide, therefore, in determining the approximate Gupta year, for which the calculations should be made, is the fact that this inscription shews that the Parivrājaka *Mahā āpa* Hastin was, at the time of this record, contemporaneous with the *Mahārāja* Sarvanātha of Uchchakalpa. For the *Mahārāja* Hastin, we have the extreme recorded dates of Gupta-Saṁvat 156 and 191; while, for the *Mahārāja* Sarvanātha, we have similarly the dates of the years 193 and 214; and for his father, Jayanātha, the latest date of the year 177, all of which may have to be referred to the Gupta era. If so, the Mahā-Māgha *saṁvatsara* in question, — on the assumption that what should be its regular place in the series was not affected by any omissions and repetitions subsequent to the Mahā-Vaiśakha *saṁvatsara* which was current on Kārttika śukla 3 in Gupta-Saṁvat 156,—must be found in or about Gupta-Saṁvat 189 or 201; with a preference in

¹⁷ For this same reason, probably, the given date was specially selected for making the grant; since, the com-

mencement of a *saṁvatsara* is regarded by Hindus as a very auspicious occasion.

favour of the year 189, because of the early date of the year 156 for the *Mahārāja* Hastin.

For Gupta-Samvat 189 + 242 = Saka-Samvat 431 current, the given date, *viz.* the nineteenth day of the month Karttika, corresponds to Monday, the 13th October, A.D. 508. Mr. Sh. B. Dikshit finds (see the Table, Col. E 1) that Jupiter's rising, next before the given date, took place on Śrāvāṇa Śukla 15 of the same year, Saka-Samvat 431, corresponding to Monday, the 25th July, A.D. 508; or, by the English calendar, on Tuesday, the 29th July. His longitude then was $117^{\circ} 4'$. By both the systems of unequal spaces, he was then in Maghā; and the *saṃvatsara* which then began, must have been named **Mahā-Māgha**. Jupiter's next following rising took place on Āśvina kṛishṇa 13 of Saka-Samvat 432, corresponding to Saturday, the 29th August, A.D. 509; or, by the English calendar, on Sunday, the 29th August. His longitude then was $147^{\circ} 49'$. By both the systems of unequal spaces, he was then in Uttara-Phalgunā; and the *saṃvatsara* which then began, must have been named Mahā-Phalgunā. Therefore, by both the systems of unequal spaces, in Gupta-Samvat 189, with the running difference of two hundred and forty-two years between current Gupta and current Saka years, **the Mahā-Māgha saṃvatsara was current on the given date**. And this result gives Saka-Samvat 431 current (A.D. 508-509), as the equivalent of the possible current Gupta year.

Again, for Gupta-Samvat 201 + 242 = Saka-Samvat 443 current, the given date, *viz.* the nineteenth day of the month Karttika, corresponds to Friday, the 2nd October, A.D. 520. Here Mr. Sh. B. Dikshit finds (see the Table, Col. E 2) that Jupiter's rising, next before the given date, took place on Bhādrapada Śukla 3 of the same year, Saka-Samvat 443, corresponding to Sunday, the 2nd August, A.D. 520; or, by the English calendar, on Monday, the 3rd August. His longitude then was $121^{\circ} 36'$. By both the systems of unequal spaces, he was then in Maghā; and the *saṃvatsara* which then began, must have been named **Mahā-Māgha**. Jupiter's next following rising took place on Āśvina kṛishṇa 1 of Saka-Samvat 444, corresponding to Friday,

the 3rd September, A.D. 521; or, by the English calendar, on Saturday, the 4th September. His longitude then was $152^{\circ} 17'$. By both the systems of unequal spaces, he was then in Uttara-Phalgunā; and the *saṃvatsara* which then began, must have been named Mahā-Phalgunā. Therefore, by both the systems of unequal spaces, in Gupta-Samvat 201 also, with the running difference of two hundred and forty-two years between current Gupta and current Saka years, **the Mahā-Māgha saṃvatsara was current on the given date**. And this result gives Saka-Samvat 443 current (A.D. 520-21), as the equivalent of the possible current Gupta year.

The results for these two years, Gupta-Samvat 189 and 201, answer, as is required, to the running difference of two hundred and forty-two years between current Gupta and current Saka years. But they do not, in themselves, prove it; for the reason that the current Gupta year itself is not mentioned in the record. The important point is, that in neither of these two cycles was the Mahā-Māgha *saṃvatsara* omitted.

If the dates in the grants of the *Mahārājas* of Ucheṃkalpa are to be referred to the Kalachuri era,¹¹ then the Mahā-Māgha *saṃvatsara* of this record will be earlier by either one or two cycles than the first of the two years given above. Here, again, in respect of the actual epoch no absolute proof can be derived from this record; and the only important point is, to ascertain that the Mahā-Māgha *saṃvatsara* was not omitted in either of the two cycles in question. Mr. Sh. B. Dikshit finds that, in Gupta-Samvat 165 + 242 = Saka-Samvat 407 current, Jupiter's rising took place on Śrāvāṇa Śukla 10, corresponding to Thursday, the 19th July, A.D. 484; or, by the English calendar, on Friday, the 29th July. His longitude then was $108^{\circ} 19'$. By both the systems of unequal spaces, he was then in Āślēṣhā; and the *saṃvatsara* which then began, and which was current through the whole month of Kārttika in the same year, must have been named **Mahā-Māgha**. Again, in Gupta-Samvat 177 + 242 = Saka-Samvat 419 current, Jupiter's rising took place on Bhādrapada kṛishṇa 13, corresponding to Wednesday, the 24th July,

¹¹ See note 1 above.

A.D. 496; or, by the English calendar, on Thursday, the 25th July. His longitude then was $112^{\circ} 48'$. By the Brahma-Siddhānta system of unequal spaces, he was then in Maghā, and by the Garga system, in Āślēshā; and, by both systems, the *saṃvatsara* which then began, and which was current through the whole month of Kārttika in the same year, must have been named **Mahā-Māgha**. Therefore, by both the systems of unequal spaces, in Gupta-Saṃvat 165 and 177 also, with the running difference of two hundred and forty-two years between current Gupta and current Śaka years, **the Mahā-Māgha saṃvatsara was current on the given date**, and was not omitted. And these results give either Śaka-Saṃvat 407 current (A.D. 484-85) or 419 current (A.D. 496-97), as the equivalent of the possible current Gupta year.

By the mean-sign system, in Gupta-Saṃvat $166 + 242 =$ Śaka-Saṃvat 408 current, the Mahā-Māgha *saṃvatsara* commenced on Chaitra śukla 5, corresponding to Thursday, the 7th March, A.D. 485; and it was current through the whole month of Kārttika in the same year; being followed by Mahā-Phālguna on Chaitra śukla 12 of Śaka-Saṃvat 409, corresponding to Monday, the 3rd March, A.D. 486. Again, in Gupta-Saṃvat $177 + 242 =$ Śaka-Saṃvat 419 current, the Mahā-Māgha *saṃvatsara* commenced on Phālguna kṛishṇa 12, corresponding to Thursday, the 16th January, A.D. 497;

and it was current through the whole month of Kārttika in Gupta-Saṃvat 178; being followed by Mahā-Phālguna on Māgha śukla 4 of Śaka-Saṃvat 420, corresponding to Monday, the 12th January, A.D. 498. Again, in Gupta-Saṃvat $189 + 242 =$ Śaka-Saṃvat 431 current, the Mahā-Māgha *saṃvatsara* commenced on Pausa kṛishṇa 3, corresponding to Wednesday, the 26th November, A.D. 508; and it was current through the whole month of Kārttika in Gupta-Saṃvat 190; being followed by Mahā-Phālguna on Pausa kṛishṇa 9 of Śaka-Saṃvat 432, corresponding to Sunday, the 22nd November, A.D. 509. And thus, by this system also, in Gupta-Saṃvat 166, 178, and 190, **the Mahā-Māgha saṃvatsara was current on the given date**. But this was not the case in the next cycle. In Gupta-Saṃvat $201 + 242 =$ Śaka-Saṃvat 443 current, the Mahā-Māgha *saṃvatsara* commenced on Kārttika śukla 9, corresponding to Tuesday, the 6th October, A.D. 520, and falling four, five, or six days after the nineteenth day of the month; and it was followed by Mahā-Phālguna on Kārttika kṛishṇa 1 of Śaka-Saṃvat 444, corresponding to Saturday, the 2nd October, A.D. 521, and falling seventeen, eighteen, or nineteen days before the nineteenth day of the month. And thus, though the given *saṃvatsara* was not omitted, the given day did not fall within the limits of its duration.

WEBER'S SACRED LITERATURE OF THE JAINS.

TRANSLATED BY DR. HERBERT WEIR SMYTH.

(Continued from p. 292).

For the present at least it is quite uncertain how we are to understand this peculiar notice, or how we are to bring it into harmony with the position, which Vajra holds elsewhere in tradition, that is, as the last *daśapūrvīn*—knower of (merely) ten *pūrvas*. After him there were only *navapūrvīns*, and the knowledge of the *pūrvas* gradually decreased until it finally ceased altogether (p. 213). We can determine at least *this* with certainty—that a thorough-going difference existed between *añga* twelve and the

other eleven. The hostility of the great Bhadrabāhu, who is held to be the real representative of the *apṛishṭivāda*, to the sacred *saṃgha* is apparent from other sources and from the late notice in Hēmachandra's *pariśiṣṭaparvan* (above, p. 214).⁶¹ The reason for this enmity can be clearly discerned in the statements, which have been preserved in reference to the twelfth *añga*. It may be permitted here to refer to the discussion of the same later on. According to these statements, the first two of the five

⁶¹ If Bhadrabāhu appears here and elsewhere, in the tradition, as the last teacher of the 14 *pūrvas*, which form an integral part of the *apṛishṭivāda*, and if with his pupil in the 14 *pūrvas*, Śtūlabhadra, the mere knowledge of the last four *pūrvas* is said to have vanished

this is in no greater agreement with the information derived from the *Siddhānta* itself (see above, p. 215) than with the above statements in reference to Vajra's activity in the case of the *duttha*. See above, page 215.

parts in which it was presumably divided, dealt with the views (*drishṭi*) of the heterodox sects, the *ājīvika* and the *térāsia*⁶² besides treating of other subjects [248]. The name *drishṭivāda* may perhaps be explained by reference to this fact. The third part consisted of the so-called 14 *pūrvas*, the contents of which was probably not in entire harmony with the sect of the *Śvētāmbaras*, which had gradually arrogated to itself the position of being the representative of orthodoxy. This then is perhaps the reason for the loss of the twelfth *aṅga*.

The remaining extant eleven *aṅgas* by no means represent a unit, since they fall into several groups, the single members of which are marked by certain formal peculiarities, which prove a connection closer in the case of some than in that of others.

The first of those groups is formed by *aṅgas* 1—4, all the larger divisions of which close with the words *ti bēmi, iti bravāmi*; and according to the scholia, Sudharman, Mahāvira's pupil, is regarded as the one who gives utterance to this formula. The prose portions begin with the formula: *suyam me āsum! tēnam bhagavayā evam akkhāyam*. "I have heard, O long-lived one! Thus has that saint spoken." Sudharman is the speaker, according to the Scholia. In this formula,⁶³ which characterizes the contents as the oral transmission of the utterances of Mahāvira, a scholar of Sudharman, i.e. Jambu, is the one addressed. This introductory formula is found also in other texts of the *Siddhānta* at the commencement of the prose sections; and with this the closing formula *ti bēmi* is generally connected. From this it appears to me that an immediate connection of these prose portions with the first four *aṅgas* is here *eo ipso* indicated, in so far as in all probability [249] all bear the traces of a unifying hand. In regard to the especial connection of *aṅgas* 1—3 with one another, this fact deserves mention: that in *aṅga* 4, 57 they appear as a group which belongs by itself or as the "three *gaṇipīḍayas*" (*āchāryasya sarcasva-bhāṣanāni*) κατ' ἐξοχήν. *Aṅga* 4 is nothing but a continuation of *aṅga* 3, and in the very beginning is styled to be "the fourth *aṅga*."

A second group is formed by *aṅgas* 6—9 and

11, which in a common introductory formula refer on the one hand their contents directly to Suhamma or Jambu, and on the other are shown by other statements to have been united by one hand. See the remarks at the commencement of *aṅga* 6.

Aṅgas 7—9 appear to be connected by an especially close bond.

The fifth *aṅga* and the existing redaction of *aṅga* 10 are not embraced in either of these groups. *Aṅga* 10 belonged originally to the second group. It exists in a form demonstrably later and is composed in another dialect (Nom. Sing. in *ō*). The fifth *aṅga* takes a separate position, and begins in a very peculiar way. It possesses however one point of similarity with *aṅga* 6: *kārikās*, which state the contents of what is to follow, are found with each larger section. These sections do not have in the case of this *aṅga* the title *ajjhayaṇa*, but are called *saṃyā, śata*. The title of the *aṅga* itself has some connection with the titles of *upāṅgas* 5—7, and this fact makes plain that there is an inner connection between them.

That the reader may obtain a ready survey, I add the statements in reference to the extent of each of the *aṅgas* which are found [250] in the MSS. of each at the end. As stated above, page 231, the texts are divided into hundreds and thousands of *granthas*, i.e. groups of 32 syllables, and these are marked at the proper place (either by thousands or by five hundreds) or the collective number of the *granthas* is stated at the end. As a matter of fact the statements of the MSS. in reference to the number vary very frequently; which is to be referred to the greater or smaller number of omissions which have been made therein. We shall refer further on, under *aṅga* 1, to this matter again. The following are the numbers in question:—

1.2554 gr.,—2.2300,—3.3750,—4.1667,—5.15750,—6.5375,—7.812,—8.890,—9.192,—10.1300,—11.1316.

In the case of several *aṅgas* at the close there are special statements in reference to the number of days necessary for the study or for the recitation of the *aṅga*—see *Bhagav.* 1, 377-8,—

⁶² The traditional date for the foundation of this sect—544 after Vira is exactly 374 years later than the date which is set for Bhadrabāhu the supposed last teacher of

the 14 *pūrvas*—(*kālasatts.* v. 37).

⁶³ This is explained in very different ways

a subject which is treated of at great length in the *Vidhiprapā*.⁶⁴ I now proceed to an examination of each of the *aṅga* texts.

I. The first *aṅga* has, in its existing form, the name *āyāra*, *āchāra*, or *āyārapakappam*⁶⁵ and treats [251] in two *suakkhāṇḍhas*, *śrutaskandhas* of the manner of life of a *bhikkhu*.⁶⁶ The first *śrutask.*, *bambhachērāṇi*, *brahmacharyāṇi*, contains at present eight *ajjhayaṇas* with 44 *uddēsaṅgas*, the second: 16 *ajjh.* and 34 *udd.* It is however definitely stated that the first *śrutask.* contained previously not 8 but 9 *ajjh.* and the whole *aṅga* consequently not 24, but 25 *ajjh.* and not 78, but 85 *udd.* Cf. especially in *aṅga* 4 § 25 and § 85 and the detailed *réssumé* of the 12 *aṅga* found both there and in the *Nandī*. In § 25, where the titles of the 25 *ajjh.* are enumerated one by one, we find the name *mahāparinnā*, belonging to this *ajjh.* which is no longer extant, placed in the ninth place between 1, 8 and 2, 1⁶⁷*; and the same circumstance may be noticed as occurring in *Āvaśy.* 16, 112 fg. More exact information is found in the *Vidhiprapā* according to *Āvaśy.* 8. 46-49. Here we find that Vajrasvāmin (presumably 584 *Vīra*) extracted⁶⁸ from it the *āgāsyaṁini vijjā*; and from the fact that it contained exaggerations (*śāṁsayattanēṇa*; according to Leumann, on account of the excellence of this extract) it was lost, or rather continued to exist only in the *nijjuttī*. It was the opinion of Silāṅka (A.D. 876) that it occupied not the ninth but the eighth place.⁶⁹ This latter statement is incorrect,⁷⁰* for [252] in the existing commentary of Silāṅka⁷¹ the *mahāparinnā*, which at and probably long before his time had been lost, is placed, not between 1, 7 and 1, 8, but between 1, 6 and 1, 7—that is to say in the seventh place. In the *Vidhiprapā* there is

probably a confusion with Abhayadēva, in whose commentary on *aṅga* 4—as also in the anonymous comm. on the *Nandī*—the *mahāparinnā* keeps, it is true, the eighth place. The *nijjuttī* then, which manifestly was still extant at the time of Jinaprabha, is probably identical with that *nijj.*, of which the author of the *Āvaśy.* *nijj.* declares (2, 5) that he is himself the composer; and which served specially as a basis to the comm. of Śilāṅka. The scholia everywhere preserve a knowledge of the ninth chapter. Furthermore the comm. on *ekkhēdas.* 1 in its opening still mentions nine *bambhachērāṇi*.

The titles of the 8 extant *ajjh.* of the first *śrutaskandha* (V = *Vidhiprapā*) are:

1. satthaparinnā, śāstraparinnā, with 7 *udd.*; —in *udd.* 1 *jīvatvaṁ*, *jīvāstitvaṁ* *sāmānyēna*, in 2—7 *viśēṣēṇa prithivīkāyādyastitvaṁ*. There are many references of a polemical nature to the *Sākyas*, or *Bauddhas*, in 2. 3, according to the scholiast.

2. lōgavijaya, lōkasāravijaya, with 6 *udd.*; *mōkshāvāptihētubhūtaṁ* *chāritraṁ*.

3. sīṁsaṇijjam (sīsi°), sītōshnīyam, with 4 *udd.*; *pratilōmānulōmapariśahāḥ*.

4. sammattaṁ, [253] *samyaktvaṁ*, with 4 *udd.*; *samyagvādaḥ*, *mithyāvāda* *bhūtatīrthika-matavichāraṇā*.

5. lōgasāra; in *aṅga* 4, 25, in *Āvaśy.* *nijj.* and in the schol. on *Nandī*: *āvaṁti*, according to the words of the commencement,⁷² with 6 *udd.*; *sāmyamaḥ* *mōkshaś cha*, *munibhāvaḥ*.

6. dhūyā (dhūyaṁ V), dhūtā, with 5 *udd.*; *nijakarmaśārīrōpakaraṇa . . v i d h ũ n a n ē n a* *nihsaṁgatā*.

7. vimōha, vimōksha (?), with 8 *udd.*; *samyag niryaṇaṁ*.

8. ōhāṇasuyam (uva° V), *upadhānaśrutam*,

⁶⁴ The names of the single *ajjhayaṇas* and the number of the *uddēsaṅgas* etc. are specifically enumerated in the *Vidhiprapā*:—*aṅga* 1, 50 days; 2, 30; 3, 18; 4, 18; 5, 77 (a second statement, it seems, allots 6 months 6 days); 6, 33; 7, 14; 8, 12; 9, 7; 10, 14; 11, 24. In like manner the author examines and states the number of days necessary for certain work. *āvaśsaṅga* (8 days), *dasavēṭṭa* (15) *uttarajjhayaṇa* (39), *nīsiha* (10), *dasakappava-vahōra* (20 or 22), *mahāsiha* (45). A recapitulation in 68 *āryās** concludes the discussion: *jōgavihāṇaṁ nāma payaraṇam*.

⁶⁵ See above, p. 223, 224; this is to be studied in the third year after the *dīkshā*.

⁶⁶ Teaching sacred observances after the practice of *Vāsishtha* (1) and other saints, Wilson, Sel. works 1, 284 ed. Ro-st.

⁶⁷* According to Malayagiri and the Prākṛit authority quoted by him (*Nandī*, p. 425) between 1, 7 and 1, 8 (*ahōras.*)—L.

⁶⁸ From this it seems as if its contents touched upon the subject of magic. Was this the cause of its removal? Cf. the analogous case in *aṅga* 10. According to the *Gaṇadhārasārdhaśata* V. 29 (see p. 371) Vajrasv. borrowed the *āgāsya. vijjā* from *sumahāpāna purvā* rather than from the ninth *ajjh.* of the first *śrutask.* of *aṅga* 1.

⁶⁹ *navamajjhayaṇaṁ vōchchinnam, tam cha mahāpāraṇā itto kira āyāsagāmiṇi vijjā Vairasāminā uddharyāsi tti sāṁsayattanēṇa vōchchinnam nijjuttimātram chitthai; Silāṅkariyamaṇa puna ēyam aṭṭhamam, vimukhājjhayaṇam sattamaṁ, uvahāṇasuyam navamaṁ ti.*

⁷⁰* It would suit if Malayagiri were concerned, see the last asterism note.—L.

⁷¹ In the opening of *ajjhayaṇa* 7 we read:—*adhunā saptamādhyaṇasya mahapariṇākyasyā vasaras, tach cha vyavachchinnam iti kṛtvā tilamghyā shtamasya sambandhō vāchyah*

⁷² *āvaṁti lōgasāraṁ vā*, in the *Vidhiprapā*.

with 4 *udd.*, treats of Vīra Vardhamānasvāmin who himself practised the course enjoined in *ajjh.* 1 to 7.

This first *śrutask.* is exceedingly difficult to comprehend and belongs, as Jacobi, from whom we expect an edition,^{73*} informs me in a letter of March 14th 1880, "without doubt to the oldest portions of Jaina literature." Even the commentaries "very often do not understand the text, since from pure force of explanation they fail at reaching any explanation of the sense. The restorations, which must frequently be made, are in fact prodigious." This shows that we have to do with the method of explanation found in the later Brahmanical *sūtras*⁷⁴ (treating of ritual, grammar, philosophy), the difficulty of which is here increased from the fact that Prākṛit is the language used, and that the MSS. are uncertain. The second *śrutaskandha* is characterized by the epithet attached to it:—*agrē śrutaskandha* (*agrē* having the meaning of "later" here) as a species of supplement to the first. This is in harmony [254] with the peculiar designation of the four sections of which it consists according to the scholia, viz.:—*chūlā*, i.e. "pudding," "excrecence," used figuratively here: *uktaśēśhānurvālinī chūḍā*. The first is formed by *ajjh.* 1—7, the second by *ajjh.* 8—14, the third by *ajjh.* 15, the fourth by *ajjh.* 16. The scholia state that a fifth *chūlā* belongs to these, which is called *niśīthā-dhyayanam*.⁷⁵ being no longer reckoned as a part of the *āchāra* but placed among the *chhēlasūtras* as the first of them.⁷⁶ It belonged however to the *āchāra* at the period of *aṅga* 4, 25, where the *niśīthajjhayaṇam* is expressly designated as "25th *ajjh.*," of the *āchāra*—i.e. as the last of the 25 *ajjh.* enumerated there.⁷⁷ The impression is made upon us as if this *ajjh.* alone was called *chūliya*. The *āchāra* is there expressly designated as *sachūliyaṅga*, but

in §57, where only 24 *ajjh.* are ascribed to it, the three *aṅgas* (1—3) which are there treated of, are designated as *āyārachūliyaṅga*; a statement, which as far as I can see, is to be explained with tolerable certainty only in the above way.⁷⁸ Also [255] at the time of the *Āraṣy. niḥj.* 16, 114, the *niśīthajjh.* was still regarded as a part of the *āchāra*, and in fact plays a greater rôle there than in *aṅga* 4, 25. It is counted as having 3 *ajjh.* so that not 25 but 28 *ajjh.* enumerated there.⁷⁹ Even the *Vidhiprapā* still designates the *niśīthajjhayaṇam* as the *pañchamī chūlā* of the second *śrutaskandha*.

It consists manifestly of different constituent parts, which originally existed independently of each other, but at a later period were brought into conjunction. They begin almost always with the same formula: *sē bhikkhū vā bhikkhuṇī vā abhikkhikkhē. . .*

In the *Nandī*, the *aṅgachūliya* is expressly enumerated among the *anāṅgaparivitta* texts. This is not in harmony with the position of our *chūlās* either at §§ 25, 57, 85 of *aṅga* 4 nor with the detailed treatment of the 12 *aṅgas* in *aṅga* 4 nor in the *Nandī* itself, since there the second *śrutask.* with its *chūlās* is invariably regarded as a part of *aṅga* 1. In *aṅga* 3, 10 the *aṅgachūliya* is mentioned as third *ajjhayaṇam* of the *saṁkṣēpīya dāsū*. Consequently reference is made to a text entirely different from these *chūlās*.

The 7 *adhyay.* of the first *chūlā* have the following titles:—

1. *piṇḍēsaṇā, piṇḍaishanā*, with 11 *udd.*—"collection of the necessities of life" (see *Dasavēāl.* 5) or "rules for eating."

2. *sējjā, śayyā* with 3 *udd.*, "couch."

3. *īriyā*, [256] *īryā*, with 3 *udd.*, "conduct of the *śramana* when he goes out *piṇḍa-vasatyartham*."

4. *bhāsajjāyā, bhāskājātān* with 2 *udd.*, "what he has to say and what not to say."

^{73*} This has appeared as one of the publications of the Palt Text Society, 1882; Jacobi has also translated the text and pre-faced it by a most valuable introduction in Vol. XXII. *Sacred Books of the East*.—L.

⁷⁴ The chief representatives being Kātyāyana (-*rautas*), Pāṇini, Bāḍarāyana, Jaimini.

⁷⁵ Or *niśīthā*; *āchāraṅkalpā ni-īthā*, *sa pañchamī chūlā* ti fol. 209a. So also *pañch chūlā* as designation of the *āchāra* in the beginning of the *Niśīthobhāṣya*.

⁷⁶ The fourth *chhēlasūtram* is closely connected as regards its contents with *aṅga* 1; and in *aṅga* 3, 10 it is cited under the title of *āyāradasū*.

⁷⁷ The first *chūlā* must be reckoned as having 6, not

7, *ajjh.*, otherwise there would be in all 26 and not 25 *ajjh.*; as a matter of fact 26 names are adduced, *mahā-parivāṇī* in the ninth place. Perhaps *sajjāryā* is counted as but one *ajjhayaṇa*.

⁷⁸ *Abhaya*, it must be confessed, understands by *āchārachūlā*: *sarvāntimam adhyayanam vimukty-adhyayanam, niśīthādhyayanasya prasthānāntaratvénō 'hā nārayanāt* (?); the latter statement is however in too direct contrast to § 25.

⁷⁹ . . . *bhāvana vimutti* || 113 || *ugghāyam anugghāyam āruvanā tiriham o ni-lham tu ia arthāvisavihō āyārakappanāmō a* || 114 ||. Here we find the correct number of *adhyayanās* for both *śrutask.* for *śrut.* 1, 9, for *śrut* 2, 16.

have excerpted. He states furthermore⁹⁰ that the arhadvachanānyōga⁹¹ is divided into four groups: dharmakathānyōga uttarādhyaṇādikah, gaṇitānyōgaḥ sūryaprajñaptiyādikah, dravyānyōgaḥ pūrvāpi sammatyādikā⁹² cha, chaitrakarāṇānyōgaś cha, charādikah⁹³; the last is pradhanatamah, śēṣhānām tadarthatvāt. These statements are in all essentials a reproduction [259] of those in *Ar. nijj.* 8, 54 where *uttarādhy.* is represented by *isibhāsīgāṇā*, which the commentator however explains by *uttara*⁹⁴; see on *aṅga* 4, 14.

II. The second *aṅga*, sūyagaḍa, sūtrakṛita, destined for the fourth year of study, see p. 223f. likewise treats in two *śrutasāṅgikās* (of which the first is composed in *śloka*s and other metres,⁹⁵ the second in prose with the exception of a small portion: *ajjh.* 5, 6) of the *sūlhaśchāra*, the right course of action; and is at the same time chiefly polemical in character.⁹⁶ According to *aṅga* 4 and *Nandī*,⁹⁷ 363 heterodox opinions *anvadīṭṭhiya* (*aṅga* 4, *pāsaṇḍiya* N) are here combated; viz.: those of 180 kiriyāvāi, kriyāvādin, 84 akiriyāvāi, akriyāvādin, 67 anāṇiyāvāi, ajnānika, 32 veṇāiyāvāi, vainayika.⁹⁸ In consequence of this the commentary frequently cites the names of Chārvāka, Śākya, Bauddha, Sūnikhya, Vaiśēshika, as those who are to be understood by the *ēgē* cited in the text as opponents. These are also referred to in the text as *jāṇayā*, explained in the comm. by *paṇḍitummanayā Bauddhāh*. But as the root *ja* is elsewhere used by the Jains chiefly in a good

sense,⁹⁹ I should at least give expression to the conjecture that by these *jāṇayā* the Vaidēha king Janaka was meant,¹⁰⁰ [260] concerning whom and his guru Yajñavalkya all sorts of statements are preserved in the legends of the twelfth book of the *Mahā Bhārata*, representing either the king or both the king and his guru as having affiliations with Buddhism. See *Ind. Stud.* 1, 482.¹⁰¹ Jacob, whom I consulted in the matter, proposed (April 6th, 1880) that *gāṇaka* (cf. *hīnagāṇa*, *mahāgāṇa*) might be thought of in connection with *jāṇayā*.

The titles of the 23 *ajjhayas* of the sūtrakṛita are enumerated in the fourth *aṅga* § 23 (= S) in their present order; also in *Arasīy.* 16, where, however, the sixteen *ajjh.* of the first *śrutasāṅgikā* are apparently placed after the seven *ajjh.* of the second *śrūt.* In v. 65, 66 in the first place the first sixteen are enumerated by themselves and in v. 102 the seven others by themselves; but after *nālanādam*—the last one—we read *sōlasāṇi cha tēvissāṇi*. It is, to be sure, not impossible that these words *sōlasāṇi cha* are a mere reference to the earlier enumeration in v. 65, 66; but, at any rate, we should have expected that this reference would occur before the first of these seven names, and not after the seventh. Also in the *Vūḍḍhiprapā* (= V), the names are singly enumerated; they are:—

a. First *śrutasāṅgikā*.

1. *samaya*, with 4 *udd.*, 89 vv.: *bhūtarūḍḍādimittāṇi nirākrīyatē*; — *udd.* 1 closes:—

⁹⁰ The following passage is found also in Śānticheandra on *up.* 6, according to which Śāhālikāśārya comment it also upon the second *aṅga*, cf. Kl. 247b.

⁹¹ Sūtrādhammaṇi chād arthasya yogo anyōgaḥ, *ēgē* dhyogaḥ (cf. *āṇandī*, *āṇandī*).

⁹² *Arasīy.* 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

⁹³ *Arasīy.* 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

⁹⁴ *Arasīy.* 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161

Nāgapathe Mahavīrō [261] *Ēraṃ āna Jipōttamē tti bēmi*, 27.¹ H. Jacobi (*Kālpas*, p. 6) is the first scholar who identified the name of Mahavīra¹⁰¹ occurring here, with Nigantūtha Nītaputra (or Nigantūthādātha, " fils de Jnati," Burnouf, *Lotos*, p. 459, 486) who is mentioned in the Buddhistic legends as a contemporary of Aṣṭaśatru or of Buddha. A reference similar to that given here is found in 3 (cf. 5 and 6). See my remarks on *āṇa* 16.

2. *vṛṣaṭṭāgā*,^{v2} *vṛṣṭīlīgā* *ṛṣya* V, *vaiṭṭīlīgā*, with 3 *uḷl*, 76 vv. : *ṛṣṭīlīkarma vṛṣṭīlīgā*. It begins *sambhūṣṭāha. kīṃ na bhūṣṭāha? sarvabāhā papa pūṣṭāha dūṣṭāha*. This *apṣh*. is not referred by the Scholiast to *Vīra*, but is characterized as a teaching of *Rishabhasedāmin* to his sons ; with which statement the conclusion of the third *uḷl*. is however not in harmony. This chapter is composed in the metre called *vaiṭṭīlīgā* by Piṅgala (*chhandas* 4. 32) and by Varāhamihira (104, 55). In my opinion great importance must be attached to this circumstance. It is very probable that the similarity of this name with that of the title of our chapter is to be explained by the assumption that the metre had taken its name from the text in that metre. This designation would not only be a direct testimony [262] to the existence of this text at the time of Piṅgala and of Varāhamihira, but also—inasmuch as it rests¹⁰³ upon a representation of the *Prākṛit* word *vṛṣṭīlīgā* in Sanskrit, which was liable to be misunderstood, or upon an incorrect spelling with inorganic *t*—might be regarded as a proof that even at that early period the title of this chapter had been handed down in this incorrect form. Both of these probabilities are of extreme interest. We must here note that Varāhamihira expressly cites *Māga* V as a "*Prākṛit*" synonym of *vaiṭṭīlīgā*—see *Ind. Stud.* 8, 295—from which we may with probability infer that a direct reference is made to the language of our text or to the language of Baddhi.¹⁰⁴ Of interest, furthermore, is the fact that on 2. 1, instead of *māhant* (= *brahman*) used in a good sense—

which is a proof of the antiquity of the text—) the scholiast mentions the various readings: *jī viā* (*riās*), *jū vīdrā*. The latter is probably an intentional change of a secondary nature or perhaps a removal of the original. At the conclusion of *mid*. 3, which is composed in prose, we read:—*evam sē udāhu anuttaramāṇānuttaradāni ī anuttaranāṇudamāga-dhūrē arabhā Nayaputrē Bhagavān Vēsālīē viyāhiē* (*vyākhyatavān*) *tti bēni*. The scholiast illustrates Jūtāputra strangely enough by *Vardhamānasvāmī Rishabhasvāmī vā* and explains Vēsālīē in the first case (*i.e.* when *Jūtāputra* means *Vardhamān*.) by *Vēsālī-nagaryām*, in the second (*i.e.* when *Jūtāputra* means *Rishab*.) by *vīsālī-kah* (*vīsālīkubhābhagavatrā*). In any case this epithet, which is probably a nomenclative, is of extreme interest in this connection. Abhayadeva, too, [263] on *Bhag.* 2. 1. 12, 2 explains *Vīsālīka* by Mahāvīra and in fact as a metronymicum (!): *Vīsālā Mahāvīrajananī*. The *Vēsālīya-sāvaga* appear elsewhere in the Jaina legends, but—and herein is to be found a divergence from the Buddhist legend—in a favourable light; see *Bhagav.* 2. 197. 249; 1, 440.

3. *uvasaggapariṇā*, *upasargapariṇā* with 4
udh., 83 vv.: *pratikūlāḥ* and *anukūlāḥ* *upasar-*
gāḥ, *tais chā* 'dhvātman vishādah.

4. itthiparinnâ, thîpa° V, strîparijñâ, with 2
uḍḍi, 53 vv.: strîparîśhaḥ jêyah; conclusion
 in prose: ichchêvam âhu sê Vîrê dhuyarâê . .
 tti bêmî.

5. *narayavibhatti*, *niraya* V, *narakavibhakti*
with 2 *ull.*, 52 *vv.*; *śrīnārāyaṇasya narakapātaḥ*
tatra cā nārāyaṇo vedauḥ. "I asked the
śrīnārāyaṇo "—thus the author, according
to the school last Śaṅkarasampradāya, begins
his recital. "Thus questioned by me, *Kūṣaṇḍī*
śrīnārāyaṇo "—(*śrīnārāyaṇo*) i.e. *Nārāyaṇa*, replied."

6. A further Mahāvastava, with 29 vv., it begins: "The sunapras and bhāṅgās, the aggrims and the pāṇṣṭhīyās (Sakyaśāyā) asked about the doctrine and life (*udāra, ānāyikā, sīlā*) of the Nāg."

$$(T, \mathcal{I}, \text{comp}, \text{ext}, \text{sub})$$

¹⁰¹ According to the *Chandīya Vārtā* first described by the womb of the Brāhminī Pāṇḍurāyā, wife of the Brāhmin Uśubhaddatī (Kālidāsa, *loc. cit.* in *King's College*), then into the womb of the Khattiyā Tīrāḥī, wife of the Khattiyā Suddhuttā (Kālidāsa, *loc. cit.*), and the wife of the Khattiyā called Nēya, in the same place. Vārs is therefore called their son. Cf. also on page 268 the statements of Abhayakya Viśadā Mahāyāman. He is designated both as Nāgā Nāyaputti Nāyakaśāstrin and

as VML-h will have a χ^2 of $K^2/60 \approx 110$

10. With regard to the *śāstra* mentioned at the conclusion of *śāstra* 1, it is explained by *śāstra* 1 in *vaṇḍikā* *vaṇḍikā* is *vaṇḍikā* *vaṇḍikā* *vaṇḍikā* *vaṇḍikā* in the name of the *śāstra* is explained quite differently.

¹³ The deviation from $\alpha = 0$ (*Ind. Stud.*, 8, 168, 178) would then be overturned.

Buddha seems to have made use of this metre, since it is used in the *Dhammapada*, etc.

the king of birds, perched upon a bough of the tree exactly over the king's head and fell to preying upon a venomous serpent which it had brought from a great ant-hill. A drop of poison from the serpent dropped on the king's throat and our hero the minister perceived it. Thinking that the poison might cause the king's death if it found its way inside the body through the pores of the skin, he took out a small knife which he had with him to gently remove the fatal drop. Just at this moment the goddess Lakshmi, true to her promise, stood before him and **asked his permission to go.** He permitted her to do so and placed the knife on the king's throat. The king suddenly awoke and finding the minister with a knife at his throat upbraided him with treachery.

"If I had thoughts of killing you, my lord, I could have done it long ago. Look at the king of birds up above you, and also look at the serpent he is feasting upon. A drop of poison fell from the mouth of that deadly reptile on your Majesty's throat and for trying to remove it, I am abused. But there is no use in my remaining any longer with you." Thus spoke the minister and explained to the king how up to that moment Lakshmi had reigned in him. Continued he, "As the goddess Lakshmi remained in me up till now even my impertinent acts have met with your Majesty's approval. When I kicked at your lordship's crown and when I dragged your Majesty and your queen out of your bed-chamber, Lakshmi it was that saved me by taking the shape of a serpent from under your crown, and by pulling down the roof of the room. Now that she has abandoned me but a moment ago even a good act has been misunderstood."

He then requested the king to allow him to continue in the forest to perform penance. But the king, not to be out-done in liberality, gave him again the minister's place. Our hero, however, fearing that after Lakshmi had left him it would be unwise to accept any appointment, preferred to remain in the woods.

The moral drawn by natives of South India from this story is that only as long as the Goddess of Prosperity reigns in us we can expect to be in good circumstances.

No. XXVII.—*It is for the best.*

In a certain country there lived a king who

had a peculiar minister, and whatever the king consulted him about he always replied, "It is for the best." In a word, this minister was what would now be called an optimist.

One day the king lost one of his fingers in handling a sharp instrument, and, sending for the minister, he showed him his hand and said, sorrowfully, "See what a calamity has happened to me. I have lost one of my fingers."

The minister coolly replied, "It is for the best."

Greatly was the monarch enraged. "Vile wretch! Do you dare to say that the loss of a finger is for the best? You shall see the result of your stupid motto. You shall live in prison for a score of years," said the king.

But again the minister merely replied, "It is for the best."

"What impertinence!" said the king, and sent the minister off to jail: and so our hero had to undergo imprisonment.

The day after this affair the king went to the forest to hunt, to which amusement he was in the habit of taking his minister along with him. But as he had imprisoned him he had to go all alone, and, after a long and tiring hunt, he rested under a tree for a short sleep. Before long he heard the roar of a lion and considered himself as good as dead, for the lord of the beasts had seen the lord of men and had marked him down for his prey. The king went off into a dead faint. Now, it is a belief among the Hindûs, that lions do not eat a man who is deformed, or who sleeps. And so when the lion examined the fainting king and came to the mutilated hand he went away, spurning the monarch as useless for his prey as long as a finger was wanting.

When the king awoke, he thought within himself: "The words of my good minister have proved to be true, when I showed him my deformed hand yesterday and he said, 'It is for the best:' but I, in the love of my own self, took his words in a wrong sense and imprisoned him. Now, had it not been for my lost finger I would have fallen a prey to the lion. So my loss has worked for my good. But what good can possibly result from my imprisonment of my minister? He said it was for the best, and I shall ascertain from his own mouth what he meant."

So thinking the king returned, and at once ordered the minister to be released and to be brought before him. He came and stood before his lord accordingly, and the king explained to him all about the lion and how his words had proved to be true so far. "But how can my sending you to jail be for the best?" said the king.

Replied the minister, "My most noble lord! Had it not been for my imprisonment in the

jail I would have accompanied you to the forest and fallen a prey to the lion. After rejecting you for being deformed he would have taken me away for his feast. So I should have died. Therefore even my having lived in the jail for a day was for the best."

The king was extremely pleased with the reply and received his minister into still greater confidence.

MISCELLANEA.

RAMBLES AMONG RUINS IN CENTRAL INDIA.

Thirty or forty miles north of the river Narmadâ, in Central India, there lies a tract, enclosed east and west by the rivers Binâ and Pârbatî and south by the Vindhyan scarp, in which there are many remarkable Buddhist, Jain, and Brahmanical ruins. They consist of topes, temples, tanks, monasteries, and columns. This district was formerly part of Gôndwâna. A low range of rocky hills divides it from the Serônj plateau on the north.

Through its very centre, towards the north, flows the sacred river Bêtwâ, rising among the upland valleys of the range. Its upper course is tortuous; and the rocky hills round which it sweeps, with the broad vales and narrow glens over which the holy stream gently glides or through which it swiftly rushes, were for many hundred years before and subsequent to the commencement of the Christian era a great centre of religion and of wealth. Dotted over mountain and plain the ruins of remarkable works of art and utility testify even now to the religious zeal and mercantile activity of the past.

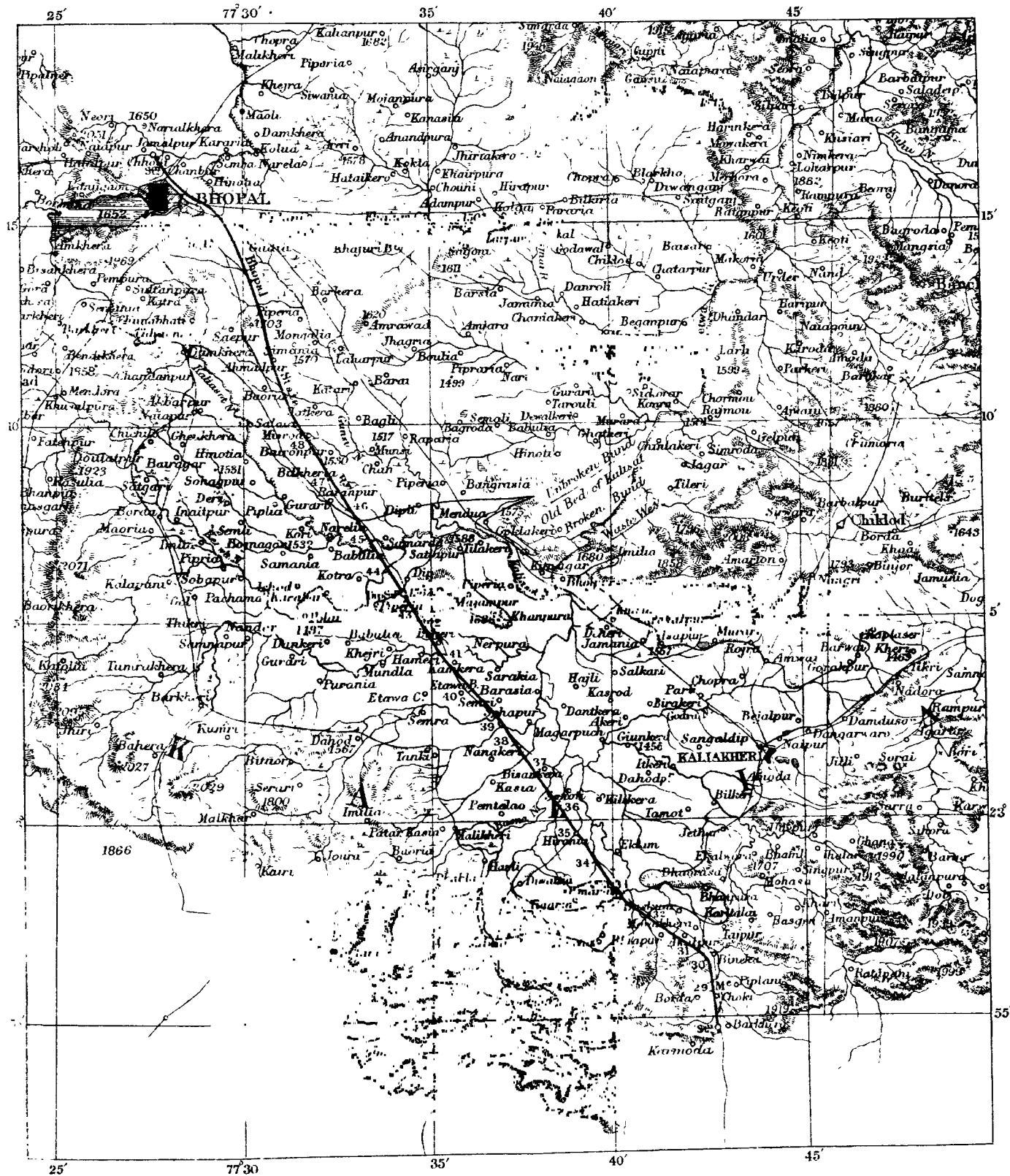
The oldest and most famed of these is the Buddhist tope upon the Sâñchi Hill, overlooking the Bêtwâ. Probably it formed the earliest centre of attraction, which for so long drew crowds of devotees and also a multitude of all classes to a district which, if it was as wild then as now, must have been singularly uninviting for human settlement. It is not my purpose in this paper to attempt a description of this famous fane, or of those of a like nature which cluster around it, or indeed to give any detailed archaeological description; but simply to sketch what I have seen of the lesser known remains of towns, temples, and tanks, still lying for the most part in the jungle and out of the beaten track of travellers, but which are about to be rendered accessible by the Indian Midland Railway.

At a very early period of this settlement, perhaps a few centuries before our era, the city of Bêsnagar must have been founded. Its site was about two miles from the Sâñchi hill. Greek and Buddhist coins, ploughed up every rains, testify to its antiquity. Moreover, its remarkable position and selected means of defence, stamp it to have been contemporary with the ancient cities of Êran, Dhâr, and Sîhôr, similarly situated and defended. It was placed between the rivers Bês and Bêtwâ, above their point of junction, within a triangle formed by a curve of the latter river and completed by an artificial communication between the two rivers. The earth excavated was formed into a high rampart, topped with brick; and thus, surrounded by deep rivers and high banks, good defence and an ample supply of pure water were assured. This circumscribed area of not more than two square miles must have been subsequently much extended. There are ruins across both the Bêtwâ and the Bês, extending to the modern Bhêlsâ on the east, to the Udigiri hills on the west, and to the spot where General Sir A. Cunningham dug up the *kalpa-druma* and the statue of Mâyâdêvi on the north. A great, rich and populous city must have stood here for centuries, perchance for a thousand years,—a focus of civilization and a centre of wealth.

The sculptured *kalpa-druma* (wishing-tree) and the statue of Mâyâdêvi (the mother of Buddha), which adorned columns in this city, are now in the Calcutta Museum. But the interesting sculptured ancient caves of the Udigiri hill, still untouched by the hand of time, are full of interest. Scattered around are remnants of capitals and columns enough to enrich a museum, and buried beneath mounds probably lie interesting, and perhaps invaluable, stone records of the ruined city and temples.

From the above account it will be understood that Bêsnagar was built between two rivers. But the sister city of Êran, fifty miles to the north-east,

The bed of the Ancient Lake of king Bhoja near Bhopal.



in the Sâgar District, was efficiently defended by a single loop of one river, the Binâ, and an artificial trench and rampart, while their contemporary, **Dhâr**, in south-western Mâlwa, was on an island surrounded by a ring of lakes, each connected with the other by deep ditches covered by lofty ramparts, which still tower forty or fifty feet above the plain. **Sihôr** was defended on a smaller scale, but in a like manner to Bēs-nagar. The Midland Railway runs between Sâñchî and Bēs-nagar, with the great tope on its right and the Udigiri hill on its left; and after crossing the Bêtwa it passes close by the ruined city to the Bhêlsâ Station.

Twenty miles east of Bhêlsâ, around the modern town of Gyârispur, lie some most beautiful ruined temples. One, indeed, affords a sublime sight, owing to its noble proportions, and the grandeur of its site and surroundings. I allude to the magnificent shrine on the extreme point to the east of the hill behind the city. Its site and platform beautifully sculptured were boldly carved out of the hill crest. On the spot, a temple of noble proportions and exquisite detail was erected, in such a manner that it appears to be a part of the cliff under which it nestles, perched 500 feet above the plain. There are few more impressive spots, and the view from the temple platform over fertile fields of green wheat, in the cold weather, is one not easily forgotten. I remember this temple, though with a damaged exterior, yet with its interior shrine intact. Treasure-seekers have now wrecked the statues and destroyed the floors, but even at the present time the view of the interior, when a flood of light enters through the eastern door from the rising sun, is very beautiful: at all other times it is dark, and can only be seen by the aid of torches. In no temple have I seen a more curious effect than that of the entry of the rays of the rising sun into the inner shrine of this one. To the ancient worshippers it must have been a supreme moment, when the Sun-god kissed into seeming life the beautiful goddess at the shrine.

At the base of the hill, not far from the high road between Bhêlsâ and Gyârispur, are two rare and interesting temples, the **Bajranâth shrines**, which will well reward close inspection; as also will the exquisitely carved roofless columns.

About thirty-four miles north of Bhêlsâ stands the rare and beautiful temple of Udayêsvara within the town of Udayapura. This is the only ancient fane in the neighbourhood, that escaped desecration or destruction at the hands of the Musalmân conquerors. Built not long before the invasion of Muhammad Tughlaq, it was ordered to be blown up by him on his

conquest of the city. Bags of powder were heaped inside and under the tower; but, watered possibly by the power of priestly gold, the powder would not burn; and the emperor, in acknowledgment of the miracle, ordered the preservation of the temple, compromising with his conscience by turning one of the two Vêda reading-halls in front and rear of the building into a mosque, dividing it by a wall from the heathen structure, and recording the fact on the archways of the entrance. This has preserved the temple to the present day, alike from the iconoclast Aurangzêb as from the occasional outbursts of fanaticism of the Mânda kings of Mâlwa. The temple is of perfect proportions and of noble form, covered with very fine sculptures. It is most strikingly harmonious, and is a perfect gem of art, not only as a whole, but in its several parts. The tapering spire, unusually lofty, is seen from afar, though, such are its perfect proportions, that its great height is not noticed when viewed near. There are three entrances, each covered by a grand porch, and the interior is even more strikingly perfect than the exterior; but, unfortunately, it is so dark that it can be only seen with the aid of torches, when it will be observed that at one time the Jains must have possessed themselves of the temple, though probably it was originally a Brâhmanical shrine. It is a curious fact that the oil for the temple lights is and has always been supplied by the family of Agra Bukera, who are Punwâr Râjputs, and claim descent from Râja Bhôj, of Dhârâ, in whose reign, or by whose family perhaps, the temple was erected. This is interesting, though General Sir A. Cunningham has been unable to trace any probable descendants of that famous king.

Twenty miles further east are to be found, in and round about the modern Pathâri, most interesting and rare remains. The most striking is the famous stone column or *lît*, the largest and most massive in the district, though far less beautiful than the slender graceful monolith of Éran, twenty miles to the north. Around it are many interesting ruins fully described in the *Archæol. Survey of India*, Vol VII. But the most beautiful and extensive is the ruined temple of Gadarmal, situated on the banks of a tank about a mile and a half from the present town in a picturesque position, near well-wooded but rugged hills, originally constructed after the manner of that of Udayêsvara. This temple was overturned and then was put together again unskilfully by the Jains with little order or symmetry. The exquisite *tôran* or gateway must have escaped, for, though half-ruined by neglect, it is still singularly beautiful, and is worth travelling far

to see. This unique gate, tottering to complete ruin, ought to be carried away to a place of safety, together with the finely sculptured and richly carved life-size *basso relievo* of the mother of Buddha and her infant. The temple is in Sindhia's dominions, and there would be no difficulty in obtaining permission for the removal of the gate. There are many Jain temples scattered about, some dating from the seventh century.

Twenty miles north-east are the remains of the Êran temples, so famed for their graceful columns and valuable inscriptions. On a high bank of the Binâ river, the beauty of the situation adds a charm to these beautiful and romantic ruins.

Returning towards Bhôpal, twenty miles south of the city are the remains of the city of Bhôjpur, not far from which is situated the ruined or uncompleted temple of Bhojpur, famed far and wide on account of its gigantic *linga*. This temple is remarkable on account of being probably the only one in India which, remaining unfinished, presents the earthen ramp up the easy slope of which were rolled, after the manner of the most ancient builders (as portrayed on Egyptian and Assyrian sculpture) the immense stone blocks for the walls and roofs. This fact, apart from its grand internal proportions, attaches great interest to this temple, which, though in a ruined condition, is still used for worship, and owing to its gigantic polished quartzite *linga*, has won local fame. I do not think the inscription on the lintel of the door has ever been carefully copied and translated. The temple evidently was built some little time subsequently to the formation of the lake on the shore of which it stands, and most likely after the city of Bhôjpur had become a place of importance. The ruins of this large town stand close by. It seems to have fallen into decay in the fifteenth century, on the construction of the dam and subsidence of the waters of the lake.

The great Bhôjpur lake, just alluded to, was without doubt the largest and most beautiful sheet of fresh water in India; indeed, the only one worthy of the name of lake as we understand it. It covered a valley which presents the most remarkable feature that, though it is so extensive, only two breaks occur in its wall of hills,—one a little more than one hundred, the other about five hundred yards wide. Both of them were spanned by very remarkable dams, consisting of an earthen central *band* faced on both sides, outer and inner, with immense blocks of stone laid one on the other without mortar, but fitting so truly as to be watertight, the two faces sloping inwards from the base. The lesser opening was

closed by a *band* 87 feet in height, and 300 feet thick at the base, or even more; the greater, by one in places 40 feet high, and about 100 feet broad on the top; and, though the first-mentioned *band* is now a complete wreck, the latter is intact and still continues to turn the river Kâliasôt into the Bêtwa, and from its top the old bed of the stream is recognisable. The lesser but higher *band* was broken by Shâh Hussain, the greatest of the Mânu kings, for the purpose of utilizing the bed of the lake; and, though tradition relates that he never personally benefited by this act, the fact of the present fertility of the valley, still growing the best wheat in the country, proves his practical statesmanship, however much we may regret the loss of a water storage of such rare size and beauty for India. The Gônds who live in the thick jungle still surrounding this valley, tell us that it took an army of labourers three months to destroy the dam, while three years elapsed before the lake was emptied, and thirty before its bed was fit for human habitation.

I do not know that the story of the construction of this lake by Râja Bhôj of Dhârâ has ever been written. It is an interesting tradition. It runs that Râja Bhôj was stricken with a severe illness, some say leprosy, which the court physicians failed to remedy. He therefore had recourse to a holy recluse, who lived at a distance, but was widely famed for his miraculous cures. The monk, after considering the case and performing many incantations and examinations of signs and omens, gave the following oracular decree:—that the king would die of the disease, unless he was able to construct a lake so great as to be the largest in India and fed by 365 streams, or a stream for every day in the year. By bathing in such a lake, on a certain day, at a certain hour, he would be cleansed, not otherwise. The king, it is related, gathered together men learned in all the sciences, and settled in his capital by reason of his liberal patronage, and consulted them. They recommended that skilled engineers should be sent along the valleys east and west of the Vindhyan range, which he near Dhâr, to explore the country and report upon the feasibility of such a lake being constructed. And it is said that, after a long and weary investigation and many hopeless failures and immense expenditure, they discovered the valley, subsequently enclosed, in which there happened to be the head-waters of the holy river Bêtwa. But, alas! only 359 springs and streams fed the waters flowing through the valley. The difficulty was however, eventually overcome by Kâlâ, a Gônd chief, pointing out the missing river, which with its tributaries, made up the number, and was

accordingly named, to this day, Kālia's river, or the Kāliasōt

This tradition preserves two important facts, viz :—(1) That the drainage area of the sources of the Bētṡā was insufficient to fill the valley through which it flowed and which it was intended to enclose. (2) That the lake thus formed was of unusual size for an Indian lake. A study of the local topography and the remains of the works, clearly proves that the engineers of those days undoubtedly understood that the drainage area of the Bētṡā and its tributaries was insufficient for their purpose, and that they skilfully supplied the deficiency by turning into the Bētṡā valley the waters of another river, which, rising twenty miles to the west, and flowing naturally outside the hill-enclosed valley, would increase the drainage area by at least five hundred square miles. This was accomplished by the creation of the magnificent cyclopean dam on which stands the old fort of Bhōpāl, and which, previous to the Bhōpāl dynasty, was covered with finely sculptured Jain temples. From the storage lake thus obtained, a river flowed at right angles to its former course round the hills into the Bētṡā valley, and became a most valuable feeder to the constructors of the great lake, because it carried the surplus waters of the storage lake into the larger lake for three full months after the close of the rains. This river is the Kāliasōt.

To test the tradition as to the lake's unusual size, emphasised by the local saying, *tāl hō tō Bhōpāl tāl, sō dāsre talgi*—"if there be a lake it is Bhōpāl lake; all others are ponds,"—a line of levels was run from the waste weir or ancient outfall to the Bhōpāl railway levels, and thence other lines were projected. These, when plotted on sheets 16, 17 and 26 of the Bhōpāl-Mālwa Topographical Survey Maps, proved that the ancient lake covered the valley to the extent of two hundred and fifty square miles,—its bed lying as shown in the accompanying map,—and must have formed the largest, as it did the most beautiful, lake in the peninsula of India, giving one unbroken sheet of water save where islands added to its beauty. It was in places a hundred feet deep, and on all sides it was surrounded by high hills covered with verdure to the water's edge, except at the clearings around the towns that sprang up on its shores. A ramble upon these shores shows that the wavelets of five hundred years have left their marks, and one is struck by the many inlets and picturesque outcrops, which, when filled with water, must have appeared almost like separate lakes and must have been of world beauty.

The waste weir, discovered by the writer in one of these rambles, lies buried in almost impenetrable jungle, and is certainly worth a visit. It is a cutting through the solid rock of one of the lower hills on the east side. It is at the blunt apex of a triangular valley, opening from near the great dam, and is probably two miles from it in a direct line. Its position, so far from the dam, affords another proof of the practical ability of the Hindu engineers of the time: for any error in levels would have quickly destroyed the dam, which, though stone-faced on both sides, was filled in by earth, and could not long have withstood an overflow. There are signs on its rocky and unbroken sides which show that high-water mark was within six feet of the top.

The second and lower but longer *band* already mentioned was thrown across the only other opening of this remarkable valley, and by its construction the Kāliasōt was turned off from its course at right angles into the Bētṡā. It is so covered with jungle that it escaped even the keen eyes of the Topographical Survey Officers. It is constructed in like manner to the other one, but is still unbroken. Its top is used as part of the high road from Bhōpāl to Kāliakhēri.

On the ancient shore at Bhōjpur the Gonds point out more than one group of large flat stones,—two upright and one horizontal,—like Keltic remains, and revered because they were used by Rāja Bhōj as his boat-houses. Sitting on one of these, and gazing afar over a perfectly flat valley bounded by the hills forming the western shore, it is not difficult to fancy an actual sea taking the place of the sea of waving green wheat, or to hear, in the rattling of the *pappal* leaves overhead, the lapping of the wavelets under the morning breeze on the rocks below. It is most interesting to listen to the Gonds telling their old-world tales of the ancient sea, how Rājā Bhōj, whose name and memory seems beloved by all others in Central India, used to sail over to the opposite shore every morning for his early visions among the Buddhist caves,—perhaps still a monastery on the top of Bhimbēt hill, and then returning for his noon-day meal. They tell of the traditions of the lake-cities now in ruins, of the spirits of the deep that interfered with the completion of the great temple, and many other tales of old connected with the mighty fort of Gomar, away on the mountains beyond the western shore. They relate with awe how the fort's deep dyke of defence, carved out of the solid rock, was cut in a single night; and how the prophecy concerning a still mightier in days to come has been verified, in their simple ideas, by the great rock cuttings of

the Bhôpâl State Railway under the neighbouring mountains. Regarding this Gônd fort and its curious defences and its adjoining ruins, I may have stories to tell at another time. It is most probable that, during the existence of the Bhôjpur lake, the local climate was much affected, particularly to the east as far as Bhêlsâ. The hot winds blowing over this city must have been tempered by the mass of water to windward. The evaporation also must have been so great that the waste weir can only have had water flowing late in the rains, and only for a short while then, and therefore for some distance the water in the Bêtâ must have been during the dry season only a fraction of what it is at the present time; and floods, frequent now, must have been then of rare occurrence. This probably explains the fact that a great deal of the city of Bhêlsâ is built below the present flood level and is subject to disastrous inundations. It was possibly built when the lake existed, indeed, on conversing with the representative of one of the oldest families of Jain merchants, he assured me he had records to prove that, when his family settled in Bhêlsâ, the Bêtâ was, as he expressed it, a dry river, and, in consequence of the difficulty of procuring water in the hot season, the members of his and other families had excavated the numerous tanks and wells, the remains of which are to be found around the city. The destruction of the lake rendered their use unnecessary; and the wells were never repaired, and the tanks relapsed into fields. It is possible that the date of the total abandonment of Bêsnagar was hastened by the drying up of its principal defence and reservoir.

Before concluding, it is worth noting that the name of Dip, a village on a small hill about half-way between Bhôpâl and the Narmadâ, and on the northern borders of the valley,—now a station on the Bhôpâl State Railway,—first attracted my attention to the traditions of the great size of the lake, which had been considered by Europeans to be much exaggerated. If the name meant anything it must mean 'island,' being a corruption of the Sanskrit *dîp*; and if the hill on which the village stands was an island, then the traditions only testified to what was true. The surveys I have alluded to, prove that the entire hill on which Dip stands really was an island, perhaps two miles in length, and that the northern shore closely touched the hills which alone separated the larger lake from its storage lake—the present lake around the modern city of Bhôpâl. I am of opinion also that the name of this city is derived in the manner related by Gônd tradition; viz. Bhôj-pâl, 'the *pâl* or *bond* of Râja Bhôj'

And the reason why this *bond* became to recent generations more famed than the great *pâl* near the city of Bhôjpur, is, I take it, that the Bhôpâl *pâl*, constructed exactly like the others, but immensely broad for its length and height, became a holy shrine of Buddhist temples, constructed on its broad top, which temples were all no doubt ruined when the founder of the Bhôpâl family wanted materials for the construction of the fort and walls of the citadel. The city of Bhôjpur probably rose so rapidly, from its salubrious position to importance, that it gave its name to the great lake which really was the cause of its existence?

I think there are few European visitors to these ruined sites who have not longed for a glimpse of the once beautiful lake, or a sail on its broad waters on a hot day in May over to the Buddhist ruins on Bhîmbêt, or a run up the romantic waste-weir valley, at the close of the rains, to hear the thunder of the overflow as it plunges down in broken cascades to the Bêtâ, 100 feet below, or an early morn or sunset sail among the isles and up the lovely bays on the western shore, some of them so enclosed as to appear separate lakes, surrounded by mountains nearly 1000 feet high and clothed to the water's edge by tropical verdure. Now, right through the old bed of the lake the iron rail is laid; the whistle of the engine is heard over the plain, and even penetrates the distant glens; and never again can the waters lie on the bosom of the valley which they fertilized whilst beautifying. The iron horse protects it, whilst it opens the scene I have endeavoured to portray to the western pilgrim; roads and rest-houses follow its track; and the beautiful Sâñchi tope, now renovated and restored by Government, the superb Gyârîspur, Udayâvara,—a veritable sculptured story,—the romantic Patihâri, and the picturesque Eran, all lie close to the new railway which will perhaps be, before the close of next year, the through route to convey all travellers to the north of India from Bombay.

W. KINCAID

ESSAY OF EUROPEAN SCHOLARSHIP
No. XI.

Transactions of the Eastern Section of the
Archæological Society, Vol. II., Part I.

Meeting Feb. 9th 1887.

Photin called the attention of Baron von... to the fact that coins of the first U... emirs and other later Sultâns are on sale in Constantinople.

N. N. Pantusov sent a Chinese inscription with a translation.

N. P. Ostroumov sent a manuscript collection of popular songs of the Sarts.

S. M. Georgievski communicated the results of his examination of the Chinese manuscript exhibited to the Society by N. M. Yadrintzev. According to his opinion it was written thirty years ago, and its object was to spread Muhammadanism in China. There is no historical information in it, only legends intended to exaggerate the antiquity of Muhammadanism in that country.

V. A. Zhukovski read his paper on the Persian sect, 'Ahl-i-Haqq'.¹

V. S. Golenistchev described the inscriptions found by him during his travels in the Wadi Hammamat.² He also exhibited some fragments of papyrus and parchment with Egyptian and Arabic texts.

D. A. Chwolson arranged the inscriptions of Semirechnia, according to their styles and dates. He decided that the word *atlia* met with in the date of the inscriptions was really a Syriac word and corresponded to the Turkish *lu*, i. e. dragon, also to be found in them.³

(b) Meeting March 16th 1887.

N. P. Ostroumov sent reprints from the *Turkestaniskia Vedomosti*, containing essays in the Sart language on local traditions and instruction in various trades and professions.

A. A. Tsagarelli read a paper on the Georgian inscriptions found and collected by P. A. Sirku. These inscriptions are to be published.

(c) Meeting April 27th 1887.

Baron von Rosen gave an account from the Arabic newspaper *Samaratü'l-funûn*, of nine marble sarcophagi recently found at Sidon.

A. A. Harkavy gave an account of a Hebrew version of the story of Alexander the Great which he found during his last visit to Egypt and Palestine, differing in many points from those previously known. He assigned the MS., which was unfortunately imperfect, to the sixteenth century.

Baron von Rosen communicated the contents of a work of an Arabian writer of the tenth century, Ibn Rosteh -- Ibn Dasth. It contains a curious description of Constantinople, particularly some customs of the Byzantine Court, described by an Arab, named Hirân Ibn Yahya, who was taken prisoner by the Byzantines. There is, besides, the itinerary of the same person from Constantinople to Rome, and a description of the noteworthy objects of the latter city.

(d) The sect of the True People, or the 'Ahl-i-Haqq, in Persia. V. Zhukovski, the writer,

while studying Kurdish dialects at Shirâz in the Spring of 1886, came in contact with a man who struck him by his severe remarks on the Musalmâns, and who acknowledged that he drank wine and ate swine's flesh, not thinking it to be sin. The man turned out to be a member of the Kurdish sect, called 'The People of Truth.' Although he was at first reserved, yet the author succeeded in taking down from his recitation a strange 'Confession of Faith,' which is here given in the original with a translation. To the north-west of Shirâz, at the distance of about three or four verst, are some villages inhabited by these sectaries, who belong to the Kurdish race of the Gurâns. The Gurâns are very interesting as having a special dialect.⁴ They furnish the greatest contingent to the sect here described, and are hated by the Musalmâns, who call them Shariât. They style themselves 'People of the Truth' ('Ahl-i-Haqq) and are very favourably disposed to the Christians, whom they consider almost as their co-religionists. They eat swine's flesh and drink wine, but esteem drunkenness a great disgrace. In some respects they conform to the outward rites of the Musalmâns to avoid persecution. They do not, however, observe the fast of Ramazân. They never shave, nor cut their moustaches, probably because they have some superstitious ideas about the power communicated by the hair. The native who furnished information to the writer about the sect, upon being asked what his co-religionists thought of Muhammad replied, "According to our traditions, it appears certain that Muhammad cut his moustaches, and therefore could not be a proper judge of or understand the truth. They pretend to take their faith from a certain Muhammad Ibn Nasir, the contemporary of 'Alî, the son-in-law of Muhammad. The sect seems to possess no religious books, but they offer sacrifices, which may consist of anything, provided it be edible, beginning with a little sugar to a sheep or cow, but there are fixed offerings on fast days, the birth of a child, or the admittance of a new member into the bosom of 'Truth.' The writer of the article discusses their religious belief at considerable length. On his way to Mazandârân from Tehrân he passed through two villages, Bunâm and Rudâm, the first of which is partly and the second entirely settled by Kurd-bachê or 'Ahl-i-Ilâhi, who do not entirely coincide with the people above mentioned, but very much resemble them. He was told by a man of "the Truth" that the only point of difference was the time for beginning the fast, which is three days later with

¹ vide infra.

² vide infra.

³ These are to be published.

⁴ See Rieu's *Catalogue of Persian MSS.* in the British Museum.

the Kurd-bachê; but this does not prevent them from being present at their assemblies and partaking of the sacrifices. M. Zhukovski was struck with the neatness and order to be seen in these villages.

(e) *A Journey to Sasinjân*.—In this article M. Veselovski describes a journey which he undertook to this place with the view of exploring a kurgân. It is situated about 70 versts from Tashkand. The name signifies 'the parting of the waters.' The kurgân was not found to yield anything of especial interest, and the chief value of the article lies in its description of the surrounding localities.

(f) *A Hoard of Coins found at Chistopol*.—There have been many finds of Kûfic coins in Russia, but those belonging to the second half and the end of the tenth century are the rarest, especially those of the Buveyyids or Bûyis. T. S. Saveliiev described a hoard, found in the Government of Kazan in the year 1855, consisting of *dirhams* of the Bûyis, who in fact ruled Baghdâd for more than a hundred years (933—1058). Their coins are noted for the abundance of inscriptions on them. There is a work on these coins by the Danish scholar Lindberg, '*Essai sur les monnaies cunéiformes frappées par les Emirs de la famille des Bouïdes et les princes de leur dépendance*.' In 1856 some more of these coins were found in the village of Mukla-heyerka, in the district of Spasskoe. Most of the coins, however, have unfortunately disappeared, with the exception of one secured by M. Likhachev. There was another find in 1862 in the village of Balimera, also in the district of Spasskoe. From this hoard the author succeeded in obtaining 45 *dirhams*. They were chiefly of the dynasty of the Bûyis. In February 1886 some Eastern coins were exhibited in the windows of a money-changer at Kazan. These he purchased. They were found in the district of Chistopol and had been sold by a Târtar to the money-changer. The find consisted of 52 *dirhams*. The earliest belonged to year 353 of the *hijra* (= 965-16 A.D.); the latest 381 of the *hijra* (= 991 A.D.). They are as follows:—1. Samanîs; two of Nasr, son of Ahmad; two of Nûh, son of Nasr; seven of Nûh, son of Mansur;—2. Bûyis; three of Azâdu'ddaula; nine of Maniyâdu'ddaula (none of these coins have been previously described); seven of Fakhr'u'ddaula; four of Khusrav Firâz;—3. Dâlamîs; one of Bîstân, two of Qabas.

To this article a note is added by Thesenhausen on six other coins of this dynasty, which as yet have not been described. The first five of these

were found in a large hoard of silver coins discovered in 1878 in the village of Molodi, in the district of Pskov. They are now in the Hermitage at St. Petersburg, and the sixth is in the collection of General A. V. Komarov.

1. A *dirham* struck in the town of Jannâb in 335 year of *hijra* (= 946-947 A.D.).

2. A *dirham* struck at Al-Muhammâdia in 338 of *hijra* (= 949-50).

3. A *dirham* struck at A-tarâbâd in year 366 of *hijra* (= 976-77).

4. A *dirham* struck at As-Sirjân in the year 366 also.

5. A fragment of a *dirham* of Azâdu'ddaula without the name of place or year.

6. A *dirham*, struck at Shurâz in 398 year of *hijra* (1007-08).

(g) *Inscriptions obtained in an Expedition to Wâdi Hammamât*, by V. Goloustchev. The journey was undertaken in the winter of 1884-1885. The author went from Kuft (the ancient Coptos) to Wâdi Hammamât, which lies between the Nile and the Red Sea, where the rocks abound with inscriptions. They refer to all periods of Egyptian history, from the earliest to the days of the Persians and Ptolemies. They have been collected and published for the most part by Lepsius.⁶ The author then describes his journey, from which we select some salient points. At Kusar-al-benât he found several graffitti and was astonished to see among Greek, Coptic and Arabic inscriptions some in characters like those found in the peninsula of Sinai. Up to this time none of these have been found on the African Continent.⁷ Further on his journey on the rock called by the Bedouins Jabal-Abu-Kuê some very old hieroglyphies were met with. The first relates to the time of the king Ameni'otep IV, the great religious innovator. A disk of the sun is figured with six rays, ending in a representation of hands. The author then gives some examples of inscriptions not included in Lepsius, and then an inscription of one H'annu, who visited the Wâdi Hammamât in the times of Pharaoh Sankharu of the eleventh dynasty. After a somewhat lengthy prelude he proceeds to describe his visit to Wâdi Hammamât. Another older inscription, relating to the second year, the fifteenth day of the month Paopi of the king Mentuhotep, records the exploits of an Egyptian named Amen-em-het. A third inscription records the difficulty which an Egyptian named Antef had in reaching the valley. "My lord, *i.e.* Pharaoh sent me to the place Ro-hanna to bring him a beautiful

⁶ Throughout this list one is struck with the large number of coins which have not been previously described.

⁶ *Inschriften aus Ägypten und Ethiopia*.

⁷ These are given on one of the sixteen plates with which the article is illustrated.

block of the valuable stone, like which there has been nothing produced since the time of a god.⁹ There was no one to act as my guide to the quarry, and I could not reach it, and I was altogether occupied in seeking it. I spent eight days in the search in this mountainous country, and I did not know where I was. Then I fell down before the god Khem, the goddess Maut, the goddess Urt-khekau and all the gods of the place and offered them sacrifices." There are also hieratic *geopitti* and rude representations of animals on these rocks.

(h) *The Embassy of Spafar*.—The text is given by A. Ivanovski, consisting of forty-one pages in the Manchû-Tâtâr language. Notes are added on various readings but nothing explanatory. The original seems to refer to some relations between Russia and China as far back as the reign of Alexis Mikhailovich (1645-1676).

(i) *Buddhist Prayers*, by I. Minayev.—A hymn to Avalôkitêsvara, taken from a collection of various prayers and hymns brought by the author from Nêpâl. The text is written in the usual Nêpâlî alphabet on a long leaf folded in the shape of a book. As the Buddhists in Nêpâl often do not understand Sanskrit at all, or know it badly, the texts of these hymns are sometimes in a very corrupt state. Besides the above-mentioned manuscript the writer has made use of two others belonging to the Cambridge University Library. At the conclusion the author of the hymn is called Charpatî,¹⁰ of whom Târânâtha speaks and who is perhaps the same as the Buddhist magician and poet.

Avalôkitesvara, to whom Charpatî composed the hymn, is prayed to in all Northern Asia, in Nêpâl, Tibet, China, Mongolia, and Japan. Millions of voices every minute reiterate his prayer—*Om mani padme hum*. Millions of hands have written and still write this great sentence of six syllables on the walls of temples, on flags and on rocks. Millions believe that the repetition of these words is sufficient for salvation. In the biography of Hiuen-Tsiang and in the travels of Fa-hian we have examples of the efficacy of prayer to Avalôkitesvara.

Minayev cites a legend of how Avalôkitesvara cured a sick Brâhman in the city of Visâla, who was learned, but an unbeliever. This legend is told in one of the redactions of the *Sargadha Samvatsara* (pp. 37-39) an extract from which work is given. He always appears in splendour to believers. He has a million eyes and a hundred thousand hands. Whosoever his splendour has touched, that

person is filled with blessed joy. In the Fifth, Sixth and Seventh Centuries Avalôkitêsvara was honoured throughout all India.¹¹ His greatness and mercy are spoken of in the *Sad Dharma-piṇḍika*, that is, in the book translated from Sanskrit into Chinese between 265-313 A.D. The representation of Avalôkitêsvara and many legends concerning him are found in Elura, Aurangabâd, and Kanûn.

According to a legend Avalôkitêsvara first appeared on Mount Patala, a mountain, in all probability, somewhere in the Dakhn, some however place it outside of India, in China or in Tibet. In Hlassa at this time still lives the incarnation of Avalôkitesvara in the person of the Dalai Lama. There the merciful one shows himself to thousands of worshippers and addresses a few words to the richer and more eminent of them. He is also the Creator of the world. From his eyes rose the moon and sun, from his forehead Mahêsvara, from his shoulders Brahmâ &c., from his heart Nârâyana, from his teeth Sarasvatî, from his mouth the wind (Vâyû), from his feet the earth, from his stomach Varanî, from his navel, fire, from his left knee, Lakshmi, from his right Bridd. And many other gods arose from his body for the use of the world, and they are all subject to Avalôkitêsvara. In China he is sometimes represented in the form of a woman (Kwan-yin). Many suggestions have been made as to the origin of the cultus of Avalôkitesvara, by Professors Vashley and Beal among others. Prof. Kern finds in it traces of a solar myth. Perhaps it is impossible to answer the question in a satisfactory way for want of materials.

j. Miscellaneous Notes.

(1) *On the graves of three Sultâns in Kasimâbâd who died in the sixteenth century.*

(2) *The Khutba of the Harifite Abû-Hamza*. In the chief work of the Arabian polymath Jâhîz, among other curious specimens of Arabian eloquence, is included a *khutba* or sermon of the Harifite Abû-Hamza.

(3) *Archæological discoveries in Syria*.—A very interesting discovery has recently been made, of which information has been communicated by a correspondent from Beyrout, who writes as follows:—Two weeks ago, the Director of the Museum, Hamûd Pây, arrived from Constantinople accompanied with a commission to transfer the monuments which have been found here to that place. The discovery has been made in a cave, cut in the rock, lying about half an hour's

⁹ i.e. since the time the gods ruled Egypt.

¹⁰ Cf. Weber, *Verzeichn. d. S. u. H. d. Egypten Charpatî*, not cited in *Siddhanta-bodhi*.

¹¹ See Peterson, *The Siva Sastra*, Bombay, 1886, page 36.

distance to the east of **Saidâ (Sidon)**. Its depth is about 15 *metres* below the level of the earth. This artificial cave had not to all appearance any doors or exit, since the inner walls, formed of the rock itself, remained undisturbed. When it was accidentally opened men were let down from above, through the opening by means of a rope, for which a wooden staircase has now been substituted by Hamdi Bey. The bottom of the cave exhibits the form of a square room, surrounded on all sides by a number of niches, also cut in the rock, in which were found magnificent sarcophagi of white marble and unusually elegant workmanship. With the exception of some of Phœnician origin, the sarcophagi are **Greek**. Three of the latter are very remarkable:—The first of these was found in the eastern niche and has the form of a mausoleum of white marble, on the side of which are carved eighteen figures of weeping women, and on the lid the ceremonial of a funeral. The two others were found in the southern niches. One of them is conspicuous by the incomparable beauty of its sculptures:—groups of warriors fighting carved on the sides, some coloured with red paint. Another is a large mausoleum, weighing about 15 tons, and a similar one is hardly to be found in the museums of the whole world. The lid is of a convex shape and exhibits groups of horses prancing and female figures. On one of its sides sphinxes are represented. The sarcophagi are all of solid marble, but nothing has been found in them. In order to get them out Hamdi Bey proposes to construct a tunnel and they are to be sent to Constantinople by a special ship. Subsequent intelligence has been received that at Saidâ another sarcophagus has been found of black marble.

(k) *Criticism and Bibliography.*

(1) *The Fall of Constantinople*, by Nestor Iskander of the XVth Century. Edited by the *Archimandrite Leonidas*. St. Petersburg, 1866. Written in Old Slavonic by a man who witnessed the taking of Constantinople by the Turks in 1453. It contains many Turkish and Arabic words.

(2) K. P. Patkanov—*Some Remarks on the Dialects of the Gipsies beyond the Caucasus*. As yet we have only received information about the European Gipsies. Although the gipsies are undoubtedly of Indian origin, yet to which of the Indian races do they belong? Why did they leave their country? At what time did their migrations begin and by what routes did they go?

The language of such a despised race would naturally be rude, and we accordingly find that they have borrowed largely from the vocabularies of the countries through which they have passed. Miklosich has done much for the philology of the European gipsies, but the Asiatic have been neglected.¹¹ The first chapter of the work treats of the gipsies generally; the second of the Caucasian races. **Boshâ**, **Karachi** and **Miutriup**; the first of which are Christians, the second Shi'as, and the third Sunnis. Of the **Bosha** language he gives 46 phrases and 233 words. It shews very strong **Armenian** influences, for the case inflections and vowel forms are Armenian. The dialect of the **Karachi** is more interesting: in this we have 101 phrases, a short tale and 268 words.¹² In contradistinction to that of the **Boshâ** it shews many independent forms, and there are no traces of the influences of Persian or any other language. The writer of the review analyses the grammatical forms and decides that the dialect is rather Iranian than Indian. He concludes with a list of some of the most valuable Russian works on the Gipsies, and congratulates M. Patkanov on this highly useful contribution to philology.

(3) *Peter Pozdnier. The Dervishes among the Musalmâns*. Orenburg, 1886. Reviewed severely by V. R[osen]. Most of it taken from John Brown's *The Dervishes, or Oriental Spiritualism*. London, 1883. The book is without scientific value. The author pretends to know Arabic, but his ignorance is shewn by many blunders.

(4) *Major Biddulph. The Populations of the Hindu Kush*, translated by P. Lessar. *Akâbâd*. An excellent translation with a good ethnological map.¹³

(5) *Pestchuror. A Chinese-Russian Dictionary*. contains about 6000 Chinese characters. The editor gives a warm welcome to this valuable little book, the first of the kind which has appeared in Russia.

(6) *Dr H. Fritsche. On Chronology and the construction of the Calendar, with special regard to the Chinese computation of time compared with the European*. St. Petersburg, 1886.¹⁴ Herr Fritsche was for sixteen years director of the Observatory at Pekin, and for some time taught astronomy in a school founded by the Chinese Government on the European model. This work is based upon the lectures delivered there. The information concerning the **Chinese Calendar** and computation of time is taken chiefly from Chinese

¹¹ [But see note, Vols. XV and XVI.—Ed.]

¹² The tale is here given, with elaborate philological annotations by K. Z., the anonymous author of this highly interesting review.

¹³ By the well-known P. Lessar. Both the name of the translator and the place of publication are noteworthy.

¹⁴ Title in English.

sources and specially from *Van-nian-shu* (the Calendar for Ten-thousand Years), from recent calendars, astronomical journals and other publications of the Tribunal of Astronomy at Peking, called *Tsin-tian-tsian*, and Chinese maps of the heavens, included in the work *Da-tsin-hui-dian*, which extends to sixty volumes and is the Encyclopædia of the Manchurian Dynasty. Herr Fritsche has also made use of Ideler's work, *Die Zeitrechnung der Chinesen*. At the end of the book is given a chronological list of the Chinese dynasties and Emperors.

(7) *J. Huas. Deutsch Chinesisches Conversations-Buch, nach Joseph Edkins*. Progressive lessons in the Chinese spoken language. Second Edition, Leipsic, 1886.

(8) *G. Deveria. La frontière Sino-Annamite. Description géographique et ethnographique d'après des documents officiels Chinois, traduits pour la première fois. Paris, 1886, with maps*. This valuable work contains plans of the various provinces from Chinese and other sources, and is a mine of information on the country and its inhabitants.

(9) *Notice sur le livre de Barlaam et Joasaph, accompagnée d'extraits du texte grec et des versions arabe et éthiopienne, par H. Zotenberg*. This work deserves the fullest attention of orientalists and students of church history generally. The object of the author is to ascertain exactly the time and place of the Greek version of this celebrated romance, the Indian origin of which admits of no doubt. Having carefully analysed the language and contents of the romance he arrives at the conclusion that the Greek redaction was made in Syria, in the first half of the seventh century, and that the belief, widely spread originally and recently reasserted by Max Müller (*Selected Essays*, London 1881), that St. John Damascenus was the author of the romance, will not stand the test of criticism. From the Greek version all the subsequent translations and imitations were made. The author analyses very carefully what he calls *le système théologique* of the romance in some chapters which shew his intimate acquaintance with patristic divinity. He refers its composition to the first half of the seventh century, and judging from some special dogmatic portions, probably to the time between 620 and 634. In Chapters vi. and viii. the author speaks of the Indian sources of the tale and discusses the route by which it was brought from India to Jerusalem, traces the importance of the Monastery of Saint Sabbas in the history of the Church and finally comes to the translations of the romance into the Eastern languages. The so-called Christian version

in Arabic appears to be a verbatim translation of the Greek and he thinks it already existed at the beginning of the ninth century and served as a foundation for the poetical imitation of the romance by the poet 'Abdu'l-Ḥamid. The Musalmân version in Arabic is also based on the Greek. He then goes on to speak of the Hebrew and Ethiopic, and briefly of the Armenian versions. To arrive at a complete knowledge, however, we still want a thorough examination of all the Greek texts and especially those preserved in the Synodal Library at Moscow. So also up to the present time our knowledge of the Arabic Musalmâm version is but scanty and it cannot well be judged of by the Hebrew imitation. V. R[osen] the writer of the review goes on to shew from the valuable work recently published by A. A. Tsagarelli in Russian, *Notices concerning the monuments of Georgian Literature*, of which the first part appeared at St. Petersburg last year, that it is quite probable that an early Georgian version of this romance existed, and believes that he finds its name among some of the works translated by St. Euthymius. Perhaps after all it was translated from Georgian into Greek. That the name of Barlaam was known pretty early in the Caucasus we find from the Georgian lives of St. Barlaam, preserved on Mount Athos (see Tsagarelli). The editor concludes by expressing a wish that some of the Georgian scholars in Russia would edit and translate the lives of St. John and Euthymius according to the manuscript of the year 1074 and also the two existing lives of St. Barlaam. By translating these documents they would confer a great benefit on science.

(10) *Ousûma Ibn Monakidh. wa Amir Tyren au premier Siècle des Croisades (1095-1188) par Hartwig Derenbourg; Deuxième partie. Texte arabe de l'autobiographie d'Ousûma publié d'après le manuscrit de l'Escurial. Paris, 1887*. The Amir wrote his autobiography towards the end of his life, when he was ninety years of age. The work is of no great value from the historical point of view; importance consists in the fact that it gives a graphic picture of the life of the period. There is no chronological order in the book and the events are narrated very confusedly. The author is fairly impartial and does not deny merit to the infidels—only the longer they have lived among Musalmâns the more civilised he finds them! He has some good stories to tell as to how some of them adopted Musalmân habits. The event of his life which he deprecates the most, is the loss of his library, consisting of 4,000 volumes. Everywhere the fatalism of the author breaks out. The reviewer V. R[osen] expresses his

thanks to M. Derenbourg for the book and thinks historians who are not orientalisists will give it a hearty welcome, but regrets that the editor did not give a photographic reproduction of the manuscript, which is unique. By comparing the page of facsimile given with the published text it is seen that the editor has made some serious mistakes.

(11.) *Dr. Friedrich Wilhelm Schwarzlose. Die Waffen der alten Araber aus ihren Dichtern dargestellt, Leipzig 1886.* The reviewer V. R[osen] thinks that the author ought to have consulted one of the *Hadises*. The book however is very learned and full of information.

(12.) *Recueil de faits relatifs à l'histoire des Seljoucides, par M. Th. Houtsma, Vol. I. 1886.*—This is the first volume of a work, in which are to be given the most important texts on this subject in the Arabic, Persian and Turkish languages. It contains the Persian texts of the history of the Kirmân Saljûqs, compiled by a certain Muhammad Ibrâhîm, who lived at the beginning of the seventeenth century. The text is given according to the only MS. known, unfortunately incomplete, belonging to the Royal Library at Berlin. We find in it part of the history of Chakir Bêg and

Tughrul Bêg; and the history of the Kirmân Saljûqs from Qâdâr (433-65) the founder of the Kirmân dynasty, till its last representative, Muhammad Shâh (A.H. 579-82). Also the history of Malik Dînâr (A.H. 591) the prince of Ghazz, who overthrew the dynasty of the Saljûqs and finally a short sketch of the fate of Kirmân till the year A.H. 619 when the power of the Qârâkhâtâis was firmly established there.

(13.) *New Publications of the Pali Text Society London.*—The publications have been delayed a whole year on account of the illness of the chief editor, Mr. Rhys-Davids. In the *Journal* of the Society we have the story how Buddha gives six of the hairs of his head to some *arhats* who asked him for something belonging to himself. The *Sandisa Kathan*, edited by Prof. Minayev; some interesting Notes and Queries by Rev. R. Morris, and a valuable *excursus* on Dêvadûta (Death Messengers), somewhat overloaded with references to general European folklore.

(14.) *Ulinam, (hymns) edited by Paul Steinthal, London 1885.* The book is made useful by its excellent indices.

W. R. MORFILL.

NOTES AND QUERIES

NOTE ON THE DERIVATION OF GUTTA-PERCHA.

Gutta-percha. "The unknown person who first rendered the Malay word *gêtah* (sap, gum, bird-lime) by the Latin word *gutta* deserves credit for an ingenuity. The accidental resemblance of the two words and the adoption of the latter by botanists may, however, be misleading as to the true derivation of the term *Gutta percha*. *Gêtah*, in Malay, is the generic term for any kind of sticky stuff which exudes from trees, plants, leaves or fruit. *perchah* means a long, bit or strip of any stuff. *Gêtah perchah* could thus mean *gêlah* in strips or pieces, altered and belied, as opposed to the semi-liquid and sticky condition of the raw substance." W. E. Maxwell, in *Journal, Straits Branch R. A. S.* No. 12, 1883, p. 297.

Gutta percha. Crawford in 1849 wrote as follows—

"Malay, *gutta-percha*, the gum of the *Percha* tree. I was at first disposed to think that the last part of the word was *perchah*, but this word, ending also in an aspirate, is Persian, and by no means likely to enter into the name of an indigenous plant, the product of which had not been an object of foreign trade." See *Journal of the Indian Archipelago*, Vol. IV, p. 734. Against

this there is the fact that the real *gutta percha* is produced by a tree called *tahan* (misprinted *taban* in Yule's *glossary*, p. 359) so that if the name is derived from that of a tree, it is one which produces "a perfumous article." Far Oxley in *Journal, Ind. A. S.* Vol. I, p. 22. But it has yet to be proved that there is a gutta-producing tree called *Percha* by the Malays. The *Iscondra* or *Dichap* is called by them *tahan*. *Percha* does not appear in the name of the kind Malay dictionary of Marsden. *Escher* has *perchah*, is the name of the tree, differing from other botanical names by inserting a final *s* only.

Piquet and Klinkert, authors of Malay-Dutch dictionaries, say that *percha* is the name of the tree which produces gutta-percha, but give no botanical name. Von de Walle in his *Malay-Dutch Dictionary* edited by Van de Tuuk, 1877, gives *percha* as the name of the tree which produces the best gutta-percha, and *tahan* as that of a tree which produces an inferior sort. The name uttered by Malays is looked by them before it assumes the appearance when it presents as an article of commerce, and my experience is that they give the name of *perchah* to that kind of *gêlah* *tahan* which hardens into strips in boiling. These are stuck together and made into balls for export.

W. E. MAXWELL.

SUMMARY OF RESULTS REGARDING THE EPOCH AND ORIGIN
OF THE GUPTA ERA.

BY J. F. FLEET, B.O.C.S., M.R.A.S. C.I.E.

WHILE treating more fully and systematically of the question of the so-called **Gupta era** in my Introduction to "The Gupta Inscriptions," *Corpus Inscriptionum Indicarum*, Vol. III., I have given from time to time portions of the discussion, and the results of the calculations of the dates, in this Journal. And for this reason, as also because many readers of this Journal, who are interested in the subject, will possibly not be in possession of the volume of inscriptions, it seems desirable to give here the concise statement of the final results arrived at by me.

The Epoch of the Era.

Albêrûnî tells us¹ that there was an era, known both as the Gupta era and the Valabhî era, the years of which were to be converted into years of the Saka era by adding, according to his most explicit statement, two hundred and forty-one years to the Gupta-Valabhî dates. This fixes the starting-point of the era, approximately, as having occurred when Saka-Saṃvat 241 had expired, and, by the epoch of the well-known Saka era,² when A.D. 319-20 was current; leaving only the determination of the exact epoch by the calculation of recorded dates. And, as regards a special point in his statements, of extreme importance, with the help of Prof. Wright, we have now obtained a translation which,—if it does not actually mean only that the Early Gupta kings had exercised so powerful a sway that, even when their dynasty came to an end, the era that had been used by them still continued in use,—is yet fully capable of that interpretation. At any rate, this translation frees us from the obligation under which we lay, by reason of M. Reinaud's rendering of the same passage, of connecting the establishment of an era with the extermination of the dynasty, and

of placing the period of the Early Gupta supremacy anterior to A.D. 319, and the termination of it in that year. And the most that can be said against it, is, that it is the literal rendering of an ambiguous original, the real meaning of which must be determined by extraneous considerations.

The **Mandasôr inscription** of Mâlava-Saṃvat 529 expired shews³ that we must look to somewhere about A.D. 319 for the starting-point of the era in which are recorded the dynastic dates of Kumâragupta and the other kings of the Early Gupta dynasty (see the accompanying genealogical Table),⁴ and any others that are to be referred to the same uniform series with them.

The dates in the records of the Early Gupta themselves, as far as the time of Skandagupta, do not afford details for computation. But clearly belonging to the same uniform series of years, is the date contained in the **Ēraṇ pillar inscription of Budhagupta**. And, converting this date into a Saka date, in the manner indicated by Albêrûnî, we have found that, the resulting Saka year being taken as an expired year, the details work out quite correctly.⁵

Such dates, also, are those contained in the **records of the Parivrâjaka Mahârâjas**; which, moreover, include a specific declaration that the Gupta sovereignty was then still continuing. And, calculating them in precisely the manner that is indicated by the results for the date in the Ēraṇ pillar inscription, we have obtained equally correct and uniform results.⁶ Also, the latest of these records, the Khôh grant of the *Mahârâja Saṃkshôbha*, *Corp. Inscr. Indic.* Vol. III. No. 25, page 112, shews that the Gupta sovereignty continued for at least two hundred and nine years. And this fact is amply sufficient to explain why,—whatever may have been its historical origin,—the era

¹ See page 243 ff. above.² See page 205 ff. above.³ *ante*, Vol. XV. page 191 ff.⁴ In this Table, below the unbroken succession, I insert the names of Budhagupta and Bhânugupta; because there is at least a strong possibility that they were descended from the same stock, though their connection with each other, and with Skandagupta, has not as yet been made clear; and because the date ofBudhagupta, at least, has always been accepted as bearing on the chronological question. For the *birdas* or second names given in brackets under the names of Chandragupta I. and Samudragupta, and for a few other points, I must refer to my remarks in *Corp. Inscr. Indic.* Vol. III. Introduction, page 18.⁵ *ante*, Vol. XVI. page 151 f.⁶ Page 331 ff. above.

used in all these records should eventually come to be popularly known as the Gupta era.

Such dates, again, are those contained in the inscriptions of Śivadēva I. and Mānadēva of Nēpal. And, that the first of them is recorded in the era in question, is shewn by the dates, in the Harsha era, for Amśuvarman, the contemporary of Śivadēva I.;⁷ while, with the same treatment, the details of the second of them work out quite correctly.⁸

Such another date is that contained in the Mōrbi grant of Jāiṅka. And the details of this, again, work out correctly with the same treatment.⁹

Such a series of dates, too, is that contained in the records of the Valabhī family. And, with a slight modification, due to a change in the scheme of the year, easily explainable, the same treatment gives correct results for the date in the Kaira grant of Dharasēna IV. of this family, of the year 330;¹⁰ the only one, at present, that affords exact details for calculation. Also, these records give us a succession of twelve generations,¹¹ commencing with the *Sēnāpati* Bhaṭārka, and ending with king Śilāditya VII., with dates ranging from the year 207 to the year 447. For the first six or seven generations, the members of this family were only feudatory *Sēnāpatīs* and *Mahārājas*, without the authority to establish an era of their own. And, as a matter of fact, the date of the year 207 for the *Mahārāja* Dhruvasēna I., in the second generation, proves that the era did not run from the rise to power of his father Bhaṭārka, the founder of the family, but must have been adopted from some outside source. While, on the other hand, the long duration of this family, coupled with the fact that several of their charters were issued from the city of Valabhī itself,¹² and all of them belong either to that vicinity or to the neighbouring parts of Gujārāt, is amply sufficient to explain why the era used by them should eventually come

to be popularly known, in those parts, as the Valabhī era.

And, finally, undeniable instances of the actual use of an era known as the Valabhī era, as late as the thirteenth century A.D., are furnished by the Verāwal inscriptions¹³ dated in Valabhī-Saṁvat 927 and 945. For the details of the earlier of these two dates, correct results can be obtained by applying the same slightly anomalous treatment that applies to the date in the Kaira grant of Dharasēna IV. of the year 330. The latter of them, however, goes far beyond this. Not only does it fix the epoch of the era approximately, and in accordance with Albērūnī's statement, through the concomitant mention of the equivalent Vikrama and Hijra years; but also the details of it are such as to prove that the epoch of the era was exactly when Saka-Saṁvat 241 had expired, and A.D. 319-20 was current. And it has furnished, in fact, the exact analogy, in accordance with which all dates in the Gupta-Valabhī era, that follow the true and original northern scheme of its years, have to be tested.

All this uniform agreement of results cannot be attributed to mere coincidence. But we must take it now, as a settled matter, that all the dates in question belong to one and the same era, running from the epoch of A.D. 319-20. And, irrespective of the question whether the era was actually established by the Early Guptas themselves, we must refer the rise of the Early Gupta power to somewhere about A.D. 319, instead of placing the period of their supremacy anterior to that year, and their downfall in it.

A few concluding words, however, seem necessary as to the exact years of the Christian era, which represent respectively the epoch or year 0, and the commencement or first current year, of the Gupta-Valabhī era.

⁷ *ante*, Vol. XV. p. 192 f

⁸ Page 210 f. above.

⁹ Page 211 ff. above.

¹⁰ *ante*, Vol. XV. p. 112 ff.; and see, more fully, *Corp. Inscr. Indu.* Vol. III. Introd. pp. 72 f., 93 ff

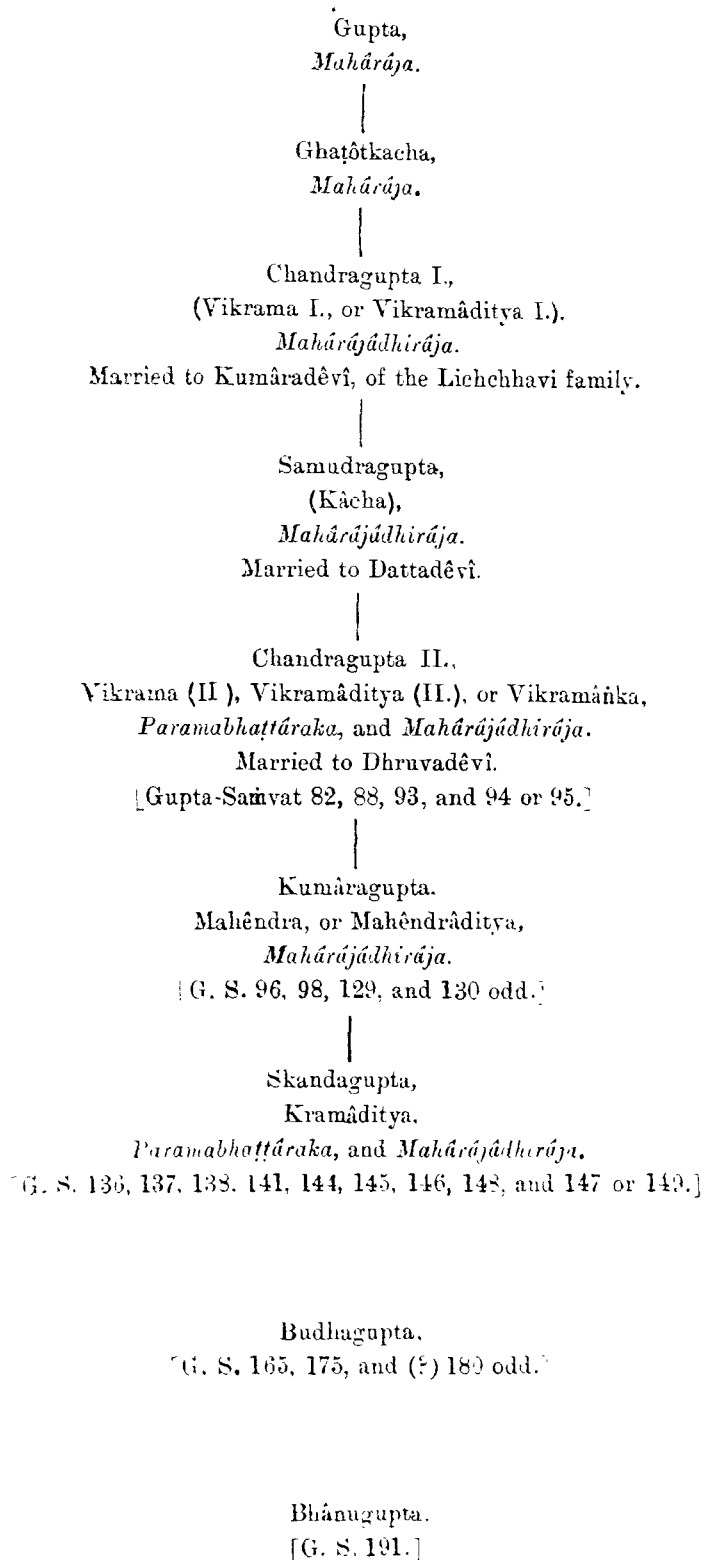
¹¹ See the Genealogy, *ante*, Vol. XV. p. 273

¹² *e.g.* the grants of Dhruvasēna I., of the year 207 (*ante*, Vol. V. p. 204); of Guhasēna, of the year 248 (*ante*, Vol. V. p. 296, and *Archæol. Surv. West. Ind.* Vol. III.

p. 93); of Dharasēna II., of the year 252 (*ante*, Vol. VII. p. 68; Vol. VIII. p. 301; Vol. XV. p. 187; and *Corp. Inscr. Indu.* Vol. III. No. 38, p. 164); of Śilāditya I., of the year 286 (*Jour. Bo. Br. R. As. Soc.* Vol. XI. p. 359, and *ante*, Vol. XIV. p. 327), and of the year 290 (*ante*, Vol. IX. p. 237); of Dhruvasēna II., of the year 310 (*ante*, Vol. IV. p. 12); and of Dharasēna IV., of the year 326 (*ante*, Vol. I. p. 14, and *Jour. Bo. Br. R. As. Soc.* Vol. X. p. 66).

¹³ *ante*, Vol. XVI. pp. 147 ff., 152 ff.

Genealogy of the Early Gupta Kings.



Taking the years quoted in the records without qualification, as current years, we have obtained the following results;¹⁴—

By the Ēraṇ pillar inscription of Budhagupta, Gupta-Saṃvat 165 current = A.D. 484-85 current;¹⁵—

By the Parivrājaka grants, 156 current = A.D. 475-76 current,¹⁶ 163 current = A.D. 482-83 current,¹⁷ 191 current = A.D. 510-11 current,¹⁸ and 209 current = A.D. 528-29 current;¹⁹—

By the Nēpāl inscription of Mānadēva, 386 current = A.D. 705-706 current;²⁰—

And by the Verāwal inscription of Arjunadēva, 245 current = A.D. 1264-65 current.²¹ And all these equations give the uniform result of

Gupta-Valabhi-Saṃvat 0 =

A.D. 319-20 current,

or more precisely, by the Saka year, the period²² from the 9th March, A.D. 319, to the 25th February, A.D. 320; and

Gupta-Valabhi-Saṃvat 1 current =

A.D. 320-21 current,

or more precisely, by the Saka year, the period from the 26th February, A.D. 320, to the 15th March, A.D. 321.

The results obtained from the Kaira grant of the year 330 and the Verāwal inscription of Valabhi-Saṃvat 927, differ slightly from the above, and are — Gupta-Valabhi-Saṃvat 330 current = A.D. 648-49 current,²³ and Valabhi-Saṃvat 927 current = A.D. 1245-46 current.²⁴ In these two instances the difference is due to a local alteration of the true and original scheme of the Gupta year; made in such a way that each subsequent year commenced with the Kārttika śukla 1 immediately preceding the true commencement of the year with Chaitra śukla 1. And for these two dates, and any that may be found hereafter to belong to the same class, we have to apply the equations of Gupta-Valabhi-Saṃvat 0 =

A.D. 318-19 current, or more precisely, by the southern Vikrama year, the period²⁵ from the 12th October, A.D. 318, to the 30th September, A.D. 319; and Gupta-Valabhi-Saṃvat 1 current = A.D. 319-20 current, or more precisely, by the southern Vikrama year, the period from the 1st October, A.D. 319, to the 18th October, A.D. 320.

These two instances, however, are purely exceptional ones. And, in the case of all dates in the era referable to the true and original scheme of its years, we have to apply the epoch of A.D. 319-20, and to treat the years of the era as northern years, commencing with Chaitra śukla 1.

The equation between the epoch of the Gupta-Valabhi era and the Christian era, is not intrinsically dependent on any reference to the Saka era; and it could be established directly by European Tables. In this inquiry, however, it has been established through results that have been worked out from Hindu Tables which are arranged for the Saka era according to expired years; and, in order to use those Tables, the given Gupta-Valabhi years had to be converted into expired Saka years. The process, however, has not converted the given Gupta-Valabhi years themselves into expired years. But what has been done has simply been, first, by the addition of a uniform running difference, to obtain the current Saka year corresponding to each given current Gupta-Valabhi year; and then, in the usual way, to take the immediately preceding Saka year as the expired year that is required as the basis of the calculation. Thus, the details of the date in the Ēraṇ pillar inscription of Budhagupta, which really belong to Gupta-Saṃvat 165 + 242 = Saka-Saṃvat 407 current, have been calculated with the basis of Saka-Saṃvat 406 expired; and the details of the other dates in the same way.

¹⁴ I exclude the Bhumarā pillar inscription, as proving nothing definite, because the Gupta year is not given in it.

¹⁵ Or, more precisely, by the Saka year, as commencing with Chaitra śukla 1, the period (see *Indian Eras*, p. 172) from the 14th March, A.D. 484, to the 2nd March, A.D. 485 — The dates given in these notes are quoted as approximately correct, they may, or may not, be the exact dates.

¹⁶ Or, in the same way, the period from the 21st February, A.D. 475, to the 11th March, A.D. 476.

¹⁷ Or, in the same way, the period from the 6th March, A.D. 482, to the 22nd February, A.D. 483.

¹⁸ Or, in the same way, the period from the 25th February, A.D. 510, to 15th March, A.D. 511.

¹⁹ Or, in the same way, the period from the 5th March

A.D. 528, to the 24th February, A.D. 529.

²⁰ Or, in the same way, the period from the 1st March, A.D. 705, to the 20th March, A.D. 706.

²¹ Or, in the same way, the period from the 1st March, A.D. 1264, to the 19th March, A.D. 1265.

²² Here I owe the initial and ending dates, which it was desirable to have exactly, to Mr Sh. B. Dikshit.

²³ Or, more precisely, by the southern Vikrama year as commencing with Kārttika śukla 1, the period (see C. Patell's *Chronology*, p. 122) from the 24th September, A.D. 648, to the 12th October, A.D. 649.

²⁴ Or, in the same way, the period from the 23rd October, A.D. 1245, to the 12th October, A.D. 1246.

²⁵ Here, again, I owe the exact dates to Mr Sh. B. Dikshit.

Now, in the case of an era used specially by astronomers for their technical processes, as the Saka era was, since we have to work with expired years, it is natural enough that the Tables should be arranged accordingly. And possibly, after a certain period, and in certain parts of India, we may have to interpret any given year of such an era as an expired year, whether it is expressly denoted as such or not.²⁶ But the same rule does not hold good in the case of eras that are not actually used for astronomical processes, though they are quoted in connection with details fixed by such processes. Such an era is the Vikrama era.²⁷ And, —though the expired years of this era might be quoted, as is shewn, for instance, by lines 19 and 21 of the Mandasôr inscription of Mâlava-Saṃvat 529 expired, *Corp. Inscr. Indic.* Vol. III. No. 18, page 79,²⁸ and by line 21 of the Kaḍi grant of Jayantasimha of Vikrama-Saṃvat 1280 expired,²⁹—yet that, occasionally at least, the current years were used, is proved by the Gwâlior Sâsbahû temple inscription of Mahîpâla,³⁰ in which we have first in words the number of years expired, 1149, and then, partially in words and fully in figures, the number of the current year, 1150. Such an era, again, is the Gupta-Valabhî era; or, at least, we have not as yet obtained the slightest indication of its ever having been used by astronomers as the basis of calculations. And in the absence of the use of any word meaning “expired” in connection with the year in a Gupta-Valabhî date, it is only reasonable that we should follow the ordinary rules of interpretation, and render the original passage as denoting a current year.

In one instance only, among the Gupta-Valabhî dates at present known, is a word meaning “expired” used in connection with the year. This exceptional instance is the Môrbi grant of Jâiṅka, in which an eclipse of the sun is recorded as having occurred when the year 585 had passed by. Unfortunately, the month and *tithi*, in and on which the

eclipse occurred, are not specified; nor even the week-day. And, as we have seen at page 212f. above, it might be possible to identify the solar eclipse of this record with that of the 10th November, A.D. 904. In that case, the given year 585 expired, and the indicated year 586 current, would be equivalent to A.D. 904-905 current. It would then be as an expired year, not a current one, that the year 165 of the Êraṇ pillar inscription of Budhagupta is equivalent to A.D. 484-85 current, and so on with all the other dates. And we should have to apply, in the case of all dates in the era referable to the true and original scheme of its years, the epoch of A.D. 318-19 current, or more precisely, by the Saka year, the period³¹ from the 18th February, A.D. 318, to the 8th March, A.D. 319; and, in the case of dates belonging to the same class with those of the Kaira grant of the year 330 and the Verâwal inscription of Valabhî-Saṃvat 927, the epoch of A.D. 317-18 current, or more precisely, by the Vikrama year, the period from the 23rd September, A.D. 317, to the 11th October, A.D. 318. But we have also seen that the solar eclipse in question can be far more satisfactorily identified with that which occurred on the 7th May, A.D. 905, to do which, we have to take the given year 585 expired, and the indicated year 586 current, as equivalent to A.D. 905-906 current. And this record, therefore, furnishes strong and instructive corroboration of my view that, in the absence of any distinct specification to the contrary, we must interpret the years in Gupta-Valabhî dates as current years.

The Origin of the Era.

In taking A.D. 318-19 as the date of the rise of the Early Gupta dynasty, and either as the epoch or as the commencement of the era, — a result which, in respect of the second point, was only one year or two years different from the truth,—Mr. Fergusson's theory³² was that

²⁶ A clear instance of this is furnished by the date in the Dêogadh inscription of Bhôjadêva (see page 23f. above). By the literal rules of translation, the given Saka year, 784, has to be interpreted as a current year; but, for the calculation, it has to be applied as an expired year.

²⁷ The present Tables of this era, however, seem to be arranged, like those of the Saka era, according to expired years. And some of the almanacs quoted at page 205ff. above, give them in the same way.

²⁸ And *ante*, Vol. XV. p. 194 ff.

²⁹ *ante*, Vol. VI. p. 197.

³⁰ For the full reading and translation of the date see *ante*, Vol. XV. pp. 41, 46, and *Corp. Inscr. Indic.* Vol. III. Texts and Translations, page 22, note 5.

³¹ Here, again, I owe the exact initial and ending dates to Mr. Sh. B. Dikshur.

³² *Jour. R. As. Soc. N. S.* Vol. IV. p. 164, and Vol. XII. p. 271.

the era did not date from the accession of a king, or from any particular historical event. And he selected this particular year on the assumption — based apparently on a suggestion thrown out by Dr. Bhau Daji³ in 1864, — that the commencement of the era was regulated only by the completion of four of Jupiter's Sixty-Year Cycles from the commencement of the Saka era, in order that there might be always an even and convenient difference of two hundred and forty years between the Saka and Gupta dates. This, however, could be arranged only by applying the Sixty-Year Cycle as used now in Southern India, where it is for all reality an astronomical cycle at all; since there the cyclic years run on in regular succession, without any adjustment of them to the motion of the planet, with reference to his sign-passing or his heliacal rising, by the omission of a year on certain occasions, and are taken for the civil reckoning, as commencing and ending with the luni-solar years. According to the present southern luni-solar system, Saka-Samvat 1 current (A.D. 78-79) was the Bahadhinaya *saṃvatsara*; and Saka-Samvat 241 current (A.D. 318-19) was again the same cyclic year, Bahadhinaya; and, by this means, some justification might be found for Mr. Fergusson's view. But I have now shewn that the real epoch of the Gupta era was A.D. 319-20, which does not correspond to Saka-Samvat 241 current, so that there was, in reality, a completion of four cycles and one more even by the southern luni-solar system; and this, alone, is fatal to his view on this point. In addition to this, amongst other inscriptions, the Wāṇī grant of the Rashtrakūṭa king Govinda III., which records that in Saka-Samvat 733 the Vyaya *saṃvatsara* was current on the full-moon day of the month Vaiśākha (April-May), and the Radhaṇ grant of the same king, which records that the Sarvajit *saṃvatsara*, the next in the cycle, was current on the new-moon day of the month Śrāvapa (August) in the same year, shew very clearly that the present arrangement was not the original one, even in Southern India; as is still more pointedly, does another grant of the same king, dated in Saka-Samvat 726

(expired), the full bearing of which has been explained at page 141 f. above.

If the Sixty-Year Cycle was in use at all at the time of the commencement of the Gupta era, then, in Northern India, and in connection with a northern era, — which the Gupta era emphatically was, — the only system that can have been followed is the regular mean-sign system, according to which the cycle is truly an astronomical cycle, and the *saṃvatsaras* are regulated entirely and only by the passing of Jupiter from one sign of the zodiac into another. By Mr. Sh. B. Dikshit's calculations, from the *Sūrya-Siddhānta*, at the commencement of Saka-Samvat 1 current (A.D. 78-79), the *saṃvatsara* was Sukla, the third in the cycle; and it was followed by Pramôḍa, the fourth, on the full-moon day of the month Pausa, in December, A.D. 78. And, at the commencement of Saka-Samvat 241 current (A.D. 318-19), the *saṃvatsara* was Aṅgiras, the sixth in the cycle; which was followed by Śrīmukha, the seventh, on the ninth lunar day of the bright fortnight of the month Phālguna in February, A.D. 319. Thus, four complete cycles, and three *saṃvatsaras* over, passed between Saka-Samvat 1 and 241; and the epoch of the Gupta era, unless it were placed three years earlier, in A.D. 315-16, could not be determined by any consideration of this kind.

Nor can it have been determined by the Twelve-Year Cycle of Jupiter, the years of which may be regulated either by the passing of Jupiter from one sign of the zodiac to another; or, as was the more ancient custom, by his heliacal rising in a particular lunar mansion.³⁶ Taking first the mean-sign system, Mr. Sh. B. Dikshit finds that, at the commencement of Saka-Samvat 1 current (A.D. 78-79), the *saṃvatsara* was Mahā-Aśvayuja, the twelfth in the cycle; which was followed by Mahā-Kārttika, the first of the next cycle, on, as before, the full-moon day of the month Pausa, in December, A.D. 78. While, at the commencement of Saka-Samvat 241 current (A.D. 318-19), the *saṃvatsara* was Mahā-Pausa, the third in the cycle; which was followed by Mahā-Māgha, the fourth, on, as before, the ninth lunar day of the bright fortnight of the

³ See *Asiatic Researches*, Vol. VIII, p. 246.
³⁶ See Vol. XI, p. 159, 160, 161.
³⁷ See Vol. VI, p. 68, 160, 161.

³⁶ See Mr. Sh. B. Dikshit's paper, published at pp. 1 ff. and 312 ff. above.

month Phālguna, in February, A.D. 319. And, by the heliacal-rising system, at the commencement of Saka-Saṃvat 1 current (A.D. 78-79), the *saṃvatsara* was Mahā-Bhādrapada, the eleventh in the cycle; which was followed by Mahā-Aśvayuja, the twelfth, on the twelfth lunar day of the bright fortnight of the month Vaiśākha, in April, A.D. 78, soon after the commencement of the year. While, at the commencement of Saka-Saṃvat 241 current (A.D. 318-19), the *saṃvatsara* was Mahā-Pausha, the third in the cycle; which was followed by Mahā-Māgha, the fourth, on the sixth lunar day of the bright fortnight of the month Śrāvaṇa, in July, A.D. 318. Thus, between Saka-Saṃvat 1 and Saka-Saṃvat 241, there had expired twenty complete cycles and three *saṃvatsaras* over by the mean-sign system, and twenty cycles and four *saṃvatsaras* over by the heliacal-rising system; and the epoch of the Gupta era could not be determined by any consideration connected with this cycle, unless it should be placed in A.D. 315-16 or A.D. 314-15.

It is thus evident that the so-called Gupta era is not one which, due originally to some event occurring only in approximation to A.D. 318, 319, or 320, had its exact epoch determined, for convenience of comparison with the Saka era, by adopting the expiration of an even number of cycles of the planet Jupiter, either of the Twelve-Year or of the Sixty-Year system. And no other chronological or astronomical considerations suggest themselves, for the selection of the exact epoch that has been proved. **Its origin, therefore, must be found in some historical event, which occurred actually in A.D. 320, or so closely to that time that, when the scheme of the northern Saka year was applied, the reckoning of the era was not affected to any appreciable extent.** And here, though the point is not conclusive either way, we must bear in mind that, as I have shewn fully in *Corp. Inscr. Indic.* Vol. III. page 19 ff., in the epigraphical references to the era there is nothing at all, at any early period, to connect the name of the Early Guptas with it, especially as the founders of it; and nothing to connect the name of Valabhi with it, until at least nine centuries after its establishment.

We must also bear in mind that it is certain that **the era cannot have been established by any member of the Valabhi family**; the reasons for this being — (1) that, for the first six or seven generations, the members of this family were mere feudatory *Śrūṭapatis* and *Mahārājas*, without the authority to establish an era of their own; — and (2) that the date of the year 207 for the *Mahārāja* Dhruvasēna I., in the second generation, proves that the reckoning runs from long before the first rise to power of his father, the *Śrūṭapati* Bhātārka, by whom the family was founded.

In the same way, the first two members of the Early Gupta family, Gupta and Ghaṭōtkacha, held only the feudatory rank of *Mahārāja*, and had not the authority to establish an era. The first paramount sovereign in the family was Ghaṭōtkacha's son, Chandragupta I. And, if a Gupta era, truly and properly so called, was devised in his time, then as its starting-point there would have been selected the commencement of his reign, not the date of the rise to power of his first recorded ancestor, the *Mahārāja* Gupta; as was done in the case of the Harsha era, which disregards, not only three generations of *Mahārājas* at the commencement of the genealogy, but even the reigns of two kings, Prabhakaravardhana and Rājyavardhana II., and runs from the commencement of the reign of the third paramount sovereign, Harshavardhana himself. So, also, when the Western Chālukya king Vikramāditya VI. established a new era under the name of the Chālukya-Vikrama-Kala,³⁷ he disregarded the reigns of all his ancestors, and made the era date from his own accession to the throne. The dates in the Early Gupta records shew clearly that the Gupta era cannot, under any circumstances, run from the accession of any member of the dynasty later than Chandragupta I. And there are essential difficulties, under any normal conditions, in the way of making the era date from the commencement of his reign; *i.e.* of taking A.D. 320-21 as his first current year. For his great-grandson, Kumāragupta, we have dates in the era, ranging from the year 96 to the year 130 odd,³⁸ of which we may take, as the latest

³⁷ See ante, Vol. VIII. p. 487 ff.

³⁸ See ante, Vol. XV. p. 191.

certain one.³⁹ that of the year 129, recorded in the Mankuwar inscription, *Corp. Inscr. Indic.* Vol. III. No. 11, page 43. And, as we ought to assume that Chandragupta I. was at least twenty years old when his reign commenced, this gives us a period of a hundred and forty-nine years, which, spread over four generations, gives to each a duration of thirty-seven years and a quarter, or nearly half as much again as the usually accepted average maximum rate of twenty-five years for a Hindu generation. This, too, is only dealing with the question of generations. If we take the period of a hundred and twenty-nine years only, from the commencement of the reign of Chandragupta I. to nearly the end of that of Kumâragupta,—which gives an average of thirty-two years and a quarter for each of the four reigns,—then, as compared with the average duration, twenty years at the outside, of a Hindu reign, the excess is still more remarkable. And almost exactly the same results are obtained, if, instead of considering four generations and reigns, down to the end of the time of Kumâragupta, we take the latest certain date⁴⁰ of Chandragupta II., viz. the year 93 given in the Sâñchi inscription, *Corp. Inscr. Indic.* Vol. III. No. 5, page 29, and spread the period of ninety-three years over three reigns, or, on the same assumption as regards the age of Chandragupta I., the period of a hundred and thirteen years over three generations. On the question of generations, I will not base any particularly special objection. An analogy for an abnormal average rate might be deduced from the Western Châlukya genealogy,⁴¹ in which we have Saka-Samvat⁴² 930 for the commencement of the reign of Vikramâditya V., and Saka-Samvat 1060 for the end of the reign, and it may safely be assumed the death, of Sômeśvara III. in the third generation after him. If we take it that Vikramâditya V. was twenty years old in Saka-Samvat 930, we have one hundred and fifty years for the four generations, or an average of thirty-seven years and a half for each. But,

³⁹ And it must be very nearly his latest date; for he had then been reigning for at least thirty-three full years, and we have the date of the year 136 for his son and successor, Skandagupta. — The selection of any later date would, of course, only intensify the force of the argument.

⁴⁰ The silver coins (see *ante*, Vol. XIV, p. 65f) seem to give the year 94 or 95, but the latest absolutely certain date is the one that I quote. Here again, the adoption of a later date would only strengthen the argument.

from Saka-Samvat 930 to 1060, there were six reigns; with an average of twenty-five years, or seven less than we should have to allot to each of the four Early Gupta kings in question. And even this result is due chiefly to the extraordinarily long reign of Vikramâditya VI., for fifty-two years, from Saka-Samvat 997 to 1048. If we take the whole period of the Western Châlukya dynasty, covering one hundred and ninety years, from Saka-Samvat 895, the first year of Taila II., down to Saka-Samvat 1084, as the end of the reign and the death of Taila III.,⁴³ we have ten reigns, with an average duration of just nineteen years each. An average of thirty-two years for four successive reigns of Hindu fathers and sons, seems, from every point of view, an impossibility. And this prevents our making the Gupta era run from the commencement of the reign of Chandragupta I. We must, therefore, accept it as certain that **the Early Guptas only adopted the era of some other dynasty.** And we must look for its origin to some extraneous source.

Now, it is evident that **the Early Guptas rose to power first as feudatory Mahârâjas**, the third of whom, Chandragupta I., while holding that same rank, established his independence; so that, his successors maintaining the same position, the paramount titles, and not his original feudatory title, are always coupled with his name in the genealogical passages in their records. And, from the *Mahârâja* Gupta down to Kumâragupta, we have two feudatory governments and four reigns; which, at the average rate of twenty years, almost fill up the period indicated by the latest certain date for Kumâragupta, and, by a coincidence, place the commencement of the government of the *Mahârâja* Gupta very near to A.D. 320. If, then, we could determine the paramount sovereign of whom the *Mahârâja* Gupta was a feudatory, we should have in him the founder of the era; provided we could only shew that his successors also

⁴¹ See my *Dynasties of the Kanarese Districts*, p. 18, Table.

⁴² The exact year was doubtful when I wrote the book referred to in the preceding note; but it has now been established by the Kauthêṃ grant (*ante*, Vol. XVI, p. 15ff.)

⁴³ I exclude the short reign of Sômeśvara IV., from Saka-Samvat 1104 to about 1111, because there had been meanwhile an interruption of the Western Châlukya power by the Kalachuris of the Dekkan.

dated their records in it. And the only difficulty then remaining would be,—When Chandragupta I. and his descendants had asserted themselves as independent sovereigns, by rebellion against their masters, why should they continue to use a purely dynastic era, which had only been running for a short time and had certainly not become an astronomical era, and which would always remind them of the originally subordinate status of their ancestors; instead of establishing a new era of their own, or instead of adopting some well-known era, of general use, which could evoke no reminiscence of a humiliating kind?⁴⁴ The Early Gupta records, however, throw no light on this point; nor can we expect any, unless we obtain inscriptions of the time of the *Mahārājas* Gupta and Ghatōtkacha, or of the early years of Chandragupta I. And at present, in connection with India itself, we know of no king the commencement of whose reign can with any certainty be referred to A.D. 320; and of no historical event to which we can safely allot that date. Nor, while the Early Gupta sovereignty continued, is there any indication of the Gupta era having been used in India by any other independent dynasty. The nearest approximation to the year in question that we have, is in the case of the Kalachuri dynasty of Central India; in respect of which certain points in the records of the Parivrajaka *Mahārājas* and the *Mahārājas* of Uchchakalpa do tend to support the actual existence, in the Early Gupta period, of a Kalachuri era, and, consequently, of Kalachuri kings under some earlier name.⁴⁵ The Kalachuri dates, however, certainly cannot be referred to the Gupta epoch. And circumstances indicate that the dominion of the Kalachuri kings at that time was confined entirely to the more eastern parts of Central India; so that they were only contemporaries of the northern dynasty of which the Early Guptas were at first the servants. Mr. Fergusson's opinion,⁴⁶ again, was in the direction of the era being established, with the foundation of Valabhi as a new capital of Western India, by

the Andhra king Gôtamiputra, whom he placed⁴⁷ between A.D. 312 and 333; the *Mahārāja* Gupta being a feudatory of him or of one of his immediate successors. But the chronology of the Andhras,—who, at the best, seem to have been too essentially a western and southern dynasty to be concerned in any leading way with the history of Northern India,—still remains to be finally determined. And Dr. R. G. Bhandarkar, who has given more consideration to the subject than anyone else as yet, places Gôtamiputra about two centuries earlier,⁴⁸ in the period A.D. 133 to 154; and, according to his view of the early chronology, we should have to refer the establishment of the Gupta era to some event connected with either the downfall of the Kshatrapas of Saurashtra or the history of the Râshtrakûṭas of the Dekkan. The Kshatrapas, however, certainly did not use the Gupta era; and there is not the slightest particle of evidence that the Râshtrakûṭas ever had an era of their own. There can be but little doubt that the real paramount lords of the *Mahārājas* Gupta and Ghatōtkacha, and at first of Chandragupta I. himself, were some of the later Indo-Scythian kings of Northern India, whose duration is certain at any rate up to the time of Samudragupta. These Indo-Scythian kings must have used the Saka era. But this era, again, had not then become an astronomical era;⁴⁹ and there was, therefore, no special inducement for the Early Guptas to adopt it; but, on the contrary, there was an objection of the kind already indicated. Further, the Vikrama era was not an astronomical era; and the use of it, in those days, under the name of the Mâlava era, was probably confined to the different sections of the Mâlava tribe, and to territories of which no part was brought under the Early Gupta sway until the time of Samudragupta. And, finally, the Kaliyuga era in all probability was used only by the astronomers of Ujjain for purely technical purposes; and was not known at all in the territories in which the Early Guptas first rose to power. In fact, in India itself there was no already existing era which

⁴⁴ An objection of this sort does not apply to the use of the Gupta era by the Valabhi family. The *Sâtipati* Bhârka drove out the invaders who had overthrown the Gupta sovereignty in Western India; and may possibly have been himself the feudatory of some descendant of the original Gupta stock. And when Dharasena IV. became a paramount sovereign, it was on the disruption of the

Kananj kingdom. At neither point was there any reason for the members of this family to feel any aversion to the Gupta era.

⁴⁵ See page 331 above, note 1

⁴⁶ *Jour. R. As. Soc. N. S.*, Vol. IV. p. 128 f.

⁴⁷ *id.* p. 122.

⁴⁸ *Early History of the Dekkan*, p. 27.

⁴⁹ See page 209 above.

would recommend itself to the Early Guptas. And we have next to inquire whether there may have been any such era beyond the limits of India proper.

By a comparison of the dates of Śivadēva I. and Amśuvarman, at page 210 above, I have already shewn, in a general way, that the Gupta era was in use beyond the north-eastern frontier of India, in Nêpāl; a fact which is duly corroborated by the results for the date in the inscription of Mānadēva of the year 386. We must, therefore, now see what more particular information can be gathered from the epigraphical records of that country.⁵⁰

In the *Corp. Inser. Indic.* Vol. III. Appendix IV., I have given an account of such of the inscriptions from Nêpāl as have any bearing on the question now under consideration, this account being recast and enlarged from my original paper on "The Chronology of the Early Rulers of Nêpāl," published in this Journal, Vol. XIV. page 342ff., a reference to which will suffice for present purposes. The actual dates of them range from A.D. 635 to 854: and give a fairly clear idea of the history of the reigning families of the country during that period. They shew two separate houses, ruling contemporaneously, and mostly on equal terms; and each preserving certain distinctive characteristics of its own. One of

them was a family, the name of which is not mentioned in the inscriptions, but which in the *Vaṃśāvali* is called the Thākuri family, issuing its charters from the house or palace called Kailāśakūṭabhabavana, and uniformly using the Harsha era. The other was the Lichchhavi family, distinctly so named in the inscriptions, and in the *Vaṃśāvali* allotted to the Sūryavauśa or solar lineage, issuing its charters from the house or palace called Mānagriha, and uniformly using an era with the Gupta epoch.

That the Lichchhavi clan or tribe was one of great antiquity and power, in the direction of Nêpāl, is shewn by the writings of Fa-Hian and Hiuen-Tsiang,⁵¹ which connect them with events that preceded the *nirvāṇa* of Buddha. No exception, therefore, need be taken to the general outlines of the long account in one of the inscriptions, which, so far as the Nêpāl branch of the tribe is concerned, gives us the first really historical member of it in the person of Jayadēva I., who, by the ordinary allowance of time for each Hindu generation, must be referred to the period A.D. 330 to 355.

Proof of friendly relations between the Early Guptas and the Lichchhavis, at an early time, is given by the marriage of Chandragupta I. with Kumārādēvī, the daughter of Lichchhavi or of a Lichchhavi king.

⁵⁰ And here we may note that the Kings of Valabhi can have had nothing to do either with the introduction of an era into Nêpāl, or with the borrowing of an era from that country. As I have already had occasion to remark, the members of the Valabhi family, for the first six or seven generations, inclusive of Bhātarka, were mere feudatory *Sāhityas* and *Mahāsēnas*, and these members of the family, at any rate, cannot possibly have conquered Nêpāl, or even have extended their territory up to the confines of that country. The first of the family who claimed to be a paramount sovereign is Dharaśena IV., with the dates of 326 and 339, and with the titles of *Pāṇḍyaśāhika*, *Mahāśāhika*, and *Pāṇḍyaśāhika* in common with all his successors, and also with that of *Chikamantika*, which, not being assumed by any of his successors, may perhaps indicate that his power was more extensive than theirs was. Now, in passing, if we refer his first date of 326 to the epoch of A.D. 319-20, the result, A.D. 645-46, brings us to a very suitable period before him to assume the position and titles of a paramount sovereign, or, to the commencement of the anarchy which, as Maitrayana tells us (*op. cit.* Vol. IX. p. 20), attended the death of Harshavardhana, the warlike lord of all the region of the north. It ended in the complete disruption for the time of the kingdom of Kanauj. Amśuvarman became paramount in Nêpāl, and Adityasēna in Magadha, and the opportunity was of course taken advantage of by Dharaśena IV. to assert his independence in the west of India. But, to say nothing of the improbability of the thing on other grounds, the fact that Amśuvarman became king of Nêpāl is in itself enough to prevent our admitting the possibility of a conquest of that

country by Dharaśena IV. Referring the same date of 326 to the three earlier proposed epochs, we have respectively A.D. 403, 492, and 516. For these periods there is, perhaps, no particular objection to our assuming, for the sake of argument, that Dharaśena IV. may have extended his power over a considerable portion of Northern India in the parts nearer to Kathiāwar and Gajarat. But the Valabhi charters, in which a conquest so extensive as that of the whole of Northern India up to Nêpāl, or inclusive of that country, would most certainly have been recorded, give not the slightest hint of any such event at any time in the history of the family. In fact, with the exception of the allusion to the overthrow of the Mauryas by Bhātarka, they give absolutely no detailed information at all in connection with any of the successes claimed by the members of this family; which tends to shew very plainly that, from beginning to end, the Valabhi power was purely local. And, in connection with the earlier proposed epochs, even if Dharaśena IV. did conquer Nêpāl, or Northern India up to the frontier of Nêpāl, and did introduce there the era of A.D. 319-20, the question still remains, and cannot be answered,—Why should he act with such extreme inconsistency as to introduce there this era, which, according to those who have sought to establish those epochs, was not brought into actual use in his own territory; instead of the Gupta era, which he himself and his successors continued to employ for all the official purposes of their own kingdom?

⁵¹ See Legge's *Travels of Fa-Hien*, pp. 71, 76, *Bodhi Buddhist Records of the Western World*, Vol. I. pp. xiii, li. lv. and Vol. II. pp. 67 note, 70, 73, 77 note, 81.

And, that the Lichchhavis were then at least of equal rank and power with the Early Guptas, is shewn by the pride in this alliance manifested by the latter; exhibited in the careful record of the names of Kumāradēvi, and of her father or family, on some of the gold coins of Chandragupta I., and by the uniform application of the epithet, "daughter's son of Lichchhavi or of a Lichchhavi," to Samudragupta in the genealogical inscriptions. Again, the Allahābād pillar inscription shews that, even if Samudragupta did not make Nēpal a tributary province, his kingdom extended up to the confines of that country.

There can be no doubt that the **Early Gupta kings must have known the nature and origin of whatever era was being used by their Lichchhavi connections in Nēpal.** And the period established for Jayadēva I. approximates so closely to A.D. 320-21, that it needs but little adjustment to place the commencement of his reign actually in that year. This arrangement would give a perfectly

intelligible reason for the origin of the era, which was clung to so persistently by his descendants that they continued the use of it for at least two centuries after the introduction of the Harsha era into Nēpal, and its acceptance by their immediate neighbours, the Thākuri family of Kailāsakūpabhavana. And no objection could be taken by the Early Gupta kings to the adoption of the era of a royal house, in their connection with which they took special pride. I think, therefore, that in all probability the so-called Gupta era is a Lichchhavi era, dating either from a time when the republican or tribal constitution of the Lichchhavis was abolished in favour of a monarchy; or from the commencement of the reign of Jayadēva I., as the founder of a royal house in a branch of the tribe that had settled in Nēpal. But the question of the origin of the era is one, of course, on which further discoveries, especially if any can be made in Nēpal, may be expected to throw more light.

BOOK NOTICE

A RURAL AND AGRICULTURAL GLOSSARY for the North-West Provinces and Oudh, by WILLIAM CROOKE. B.A., B.C.S. Calcutta: Government Press, 1883.

This is a book which should be in the hands of all those who really wish to obtain an insight into the speech of the peoples inhabiting the North-West Provinces and Oudh; but as it has been issued by the Government Press and is a purely Government publication, such is not likely to be its fate. It is printed and got up in the severely uninviting style peculiar to Government publications, and no one has any particular interest in its circulation; so it will probably be distributed to a few officials, some of whom will use it, but most of whom will pigeon-hole it, while the majority of scholars and others to whom it will be specially valuable will never even hear of it.

However, it deserves a far better fate than this. It is the result of immense labour and research at first-hand, and is simply loaded with philological and folklore information of the most valuable kind. The size of the book, or the length of an article in it, is no criterion of the labour bestowed on it. Its accuracy, moreover, is guaranteed by the author's name. Let us take an example at random.

"*Chāuk* — [Skr. *chapa*, *charpā* — (1) (*barakat ki mitti*, *bachāvan*, *chhāpā*, *chattr*, *gobarchak*, *gobardhan*, *gobardhanā*, *gobarā*, *thūpā*), a piece of wood, etc., on which is an inscription in moist clay put on the heaped grain to keep off the evil eye and avoid theft. The inscription on it is usually *'ogubāt ba khair bād*. — *in in ki salāmātī*

= invocations against dishonesty.—Upper Duāb.
(2) The ceremony performed at the threshing-floor at the time of forming the grain into a heap for winnowing —Upper Duāb."

Here every synonym given for the name of this ceremony means so much separate research, which shows only in *one* word at a time. The value, too, of unearthing such customs and their localities will be appreciated by every student of folklore and custom.

The book is further full of proverbs and saws, illustrating the life of the people and their habits of thought. Mr. Crooke claims originality of research here, having purposely avoided all reference to Fallon's *Hindustani Proverbs*, ed. Temple.

Illustrations of the severely practical type accompany certain articles not otherwise explainable. And lastly Mr. Crooke has used all the authorities procurable, including those invaluable mines of information about India — the *8th Annual Reports*.

In a notice like this we cannot attempt to criticise the individual articles—indeed, for the vast majority we have nothing but praise. However, that on "*Gāgā*, *Gāgāpār*," might have been enlarged with advantage from Temple's *Legends of the Panjāb* and from *Panjāb Notes and Queries*.

With this one criticism we commend to the perusal of all who are interested in the philology, folklore, and ethnology of Upper India this very valuable addition to the anthropological literature of those parts.

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